DOCUMENT RESUME

ED 106 333 TM 004 448

AUTHOR	Cicirelli, Victor G.; And Others
TITLE	Purdue Instrumentation Project. Progress Report: Revision of Purdue Social Attitudes Scales.
SPONS AGENCY	Office of Economic Opportunity, Washington, D.C.
PUB DATE	15 Jul 72
NOTE	153p.
EDRS PRICE	MF-$0.76 HC-$8.24 PLUS POSTAGE
DESCRIPTORS	Affective Behavior; *Affective Tests; *Attitude Tests; *Childhood Attitudes; *Children; Cognitive Development; Family Life; Item Analysis; Preschool Children; Preschool Education; Primary Education; Rating Scales; Student Attitudes; Student School Relationship; Testing; Test Reliability; Test Validity
IDENTIFIERS	*Purdue Social Attitudes Scales

ABSTRACT

The assessment of the development of preschool and primary grade children has assumed greater importance in recent years with the emphasis on compensatory education programs. While the assessment of cognitive development has received the primary thrust of research efforts thus far, most child experts would agree that the child's affective development is of equal importance to his total well-being. The Purdue Social Attitudes Scale (PSAS) focuses on the latter. Research programs have been developed to determine the validity and reliability of this scale. The test booklets contain cartoon-type picture stories. The examiner reads the legend under each picture to the child. The child then selects the face which he thinks properly completes each story and places a pencil-mark in the box under that face. (Author/BJG)

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PURDUE INSTRUMENTATION PROJECT

Progress Report:
Revision of Purdue Social Attitudes Scales

Prepared for the Office of Economic Opportunity
Pursuant to O.E.O. Contract 65655

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July 15, 1972

TM 001 448

Introduction

The assessment of the development of preschool and primary grade children has assumed greater importance in recent years with the emphasis on compensatory education programs. While the assessment of cognitive development has received the primary thrust of research efforts thus far, most child experts would agree that the child's affective development is of equal importance to his total well-being. Affective responses are also viewed as factors that interact with cognitive functioning, leading to higher achievement. Yet methods of assessing affective development are poor in contrast to the many well-established measures available for assessing cognitive development.

Instruments for assessing affective development fall into three broad types: questionnaires and ratings by parents and teachers, observation instruments, and tests administered to the child (objective, situational, self-report, or projective). Each of the three types of instruments has conceptual and methodological difficulties and limitations peculiar to it. Questionnaire and rating instruments administered to parents or teachers depend on their thorough knowledge of the child. With large class sizes, teachers are often unable to know each child well, especially in the early portions of the school year. Many parents, too, pay little attention, or are insensitive to many facets of the child's behavior. Where the instruments require inferences about the child's feelings and motivations, the difficulties may be compounded.

Observation instruments, in which a trained observer records the child's behavior or observable manifestions of a given affective area, are time-consuming and cumbersome to use, and typically sample only a limited segment of behavior.

Direct measurement of the child is also difficult, in that the child is often unaware of his own motives and feelings or is unable to verbalize them, or inadvertently distorts them. The clinical interview and projective tests may be used, but require a level of professional training which makes them impractical for large scale assessment projects. (Also, there are those who seriously question the reliability of clinical judgments.) More recent attempts at assessments of primary grade children have focused

on the construction of paper and pencil instruments which would permit group testing of the affective development of children.

Two instruments of the paper and pencil type were developed for use in the Westinghouse/Ohio evaluation of Head Start.[1] One, a measure of self concept, was a modification of the Meyerowitz Index of Self-Derogation,[2] in which some items were replaced and others modified. The second instrument was a measure of children's attitudes towards home, school, peers, and society.

Both instruments were developed for the Westinghouse study under severe time pressures, and while they were adequate for the purposes of the study (i.e., relative comparisons of group differences), further revision is needed in order to improve reliability and validity of the instruments.

This report will present progress thus far on the revision of the attitude instrument. First, data on the instrument before revision will be considered.

Previous History

This instrument was named the Children's Attitudinal Range Indicator (CARI) in the Westinghouse Study, and was re-named the Purdue Social Attitude Scales (PSAS) for the revised version. (Appendix A contains a copy of this instrument.)

The PSAS was developed as a semi-projective device. The projective feature of the PSAS consists of presenting unstructured and incomplete picture-stories in three "frames", with a fourth frame containing three stylized faces depicting positive, neutral, or negative feeling tone. By having the subject indicate how each story should end, the PSAS invites his identification with the character of a particular frame-series, his investment of self in the situation presented, and a projection of his own thinking and judgment to determine the outcome. Thus, for example, a given item presents three frames showing Bobby on his way to school, approaching the building, and going inside; the subject is then required to choose which of the faces is Bobby's. In being asked to identify himself with

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[1] Westinghouse Learning Corporation/Ohio University. The impact of Head Start on children's cognitive and affective development. Volumes I and II. June 12, 1969. Clearinghouse for Federal Scientific and Technical Information, U.S. Department of Commerce, Springfield, Virginia.

[2] Meyerowitz, J. Self-derogations in young retardates and special class placement. Child Development, 1961, 33, 443-451.

Bobby, the child presumably projects himself into this situation and chooses the response for Bobby which reflects his own attitude towards school.

The PSAS consists of 8 picture stories in each of 4 areas (school, home, peers, and society) making a total of 32 items. The figures in the cartoons are ambiguous so that individuals of different ethnic/racial background will not have difficulty identifying with the figures. The purpose of the instrument is disguised in that the child is instructed to complete a story rather than to express directly his feelings toward or against an object or situation. Of the 32 items, 16 have a boy and 16 have a girl as the major child character. Within each attitudinal area, boy and girl characters are balanced. There is thus an equal opportunity for each child taking the test to identify with either sex. In addition, the great majority of the items are not sex specific in subject matter. Names given to the child-characters in the picture-stories were randomly drawn from lists of common one or two syllable names; this was done to minimize any bias due to affective reactions to particular names. Response alternatives to each of the items were scored from 1 to 3 points where "3" reflects a more positive attitude, "2" a neutral attitude, and "1" a negative attitude.

Reliability

Internal consistency reliability coefficients computed for a sample of 50 second grade pupils in a small midwestern city were: Peers = .66; School = .59; Home = .68; Society = .70; and total score = .88. Test-retest reliability coefficients for 92 pupils after a period of two weeks were: Peers = .57, School = .45, Home = .52 and Society = .49.

Internal consistency reliability coefficients were also computed for a sample of 543 second grade Head Start "graduates" from the Westinghouse study; they are as follows: Peers = .61; School = .59; Home = .68; Society = .68; Total Score = .90. (These reliability coefficients are at a level suitable for research use, but not for individual diagnosis.) Although reliability of an instrument is always a function of the group tested and the testing situation, affective measures tend to be more sensitive to situational differences than are cognitive measures. Thus one would not expect high test-retest reliabilities for affective instruments, and thus their interpretation must consider the situation at time of testing. This does not mean that affective instruments are without value, but that

their interpretation must be more cautious.

Intercorrelations of the subscores were obtained for the sample of 100 second grade pupils from a small midwestern city. They are as follows:

	School	Home	Society
Peers	.37	.42	.48
School		.59	.28
Home			.28

Intercorrelations were also computed for black, white, and Mexican-American subgroups of the second grade Head Start sample of the Westinghouse study. Thus, for 162 white children, the intercorrelations were:

	School	Home	Society
Peers	.42	.39	.29
School		.43	.32
Home			.60

while for 96 black children the intercorrelations were:

	School	Home	Society
Peers	.65	.57	.67
School		.62	.74
Home			.60

and the intercorrelations for 34 Mexican-American children were:

	School	Home	Society
Peers	.72	.71	.63
School		.68	.73
Home			.61

Thus, while intercorrelations between subscores are low for the white subgroup, they are considerably higher for the black and Mexican-American subgroups, in fact, high enough to question whether these subscores are sufficiently independent of each other to justify their use for these groups. (It should be mentioned that standard deviations on the subscores are higher for the black and Mexican-American subgroups than for the white subgroup.)

Means and standard deviations for these subgroups are presented in Table 1.

Table 1. PSAS Means and Standard Deviations for White, Black and Mexican-American Children

	Whites		Blacks		Mex-Am.	
	M	S.D.	M	S.D.	M	S.D.
Peers	20.08	2.42	19.94	3.16	20.74	2.91
School	18.04	2.40	18.33	3.14	18.85	3.28
Home	17.34	2.86	17.98	3.01	18.18	3.70
Society	19.94	2.50	19.42	3.64	20.18	2.89

Validity

In an attempt at validation, it was hypothesized that the measure would differentiate middle-class and lower-class children in the strength of positive attitudes. Accordingly, a sample of 107 second-grade children in a small midwestern city was divided into middle-class and lower-class groups on the basis of the father's occupation. Middle-class children scored higher than lower-class children on all four subscores, although this difference was significant only for the Peers and Society subscores.

Table 2. t-tests for Differences between Middle and Lower-class Children on the PSAS

	Middle Class Mean	Lower Class Mean	t	p
Peers	20.91	19.97	2.05	<.05
School	17.67	16.90	1.46	--
Home	18.14	18.00	.31	--
Society	21.33	20.27	2.37	<.05

Factor Analysis

The item scores for 500 second grade summer Head Start graduates were factor analyzed. In the first analysis, two factors were extracted by means of an oblique rotation, and in the second analysis four factors were obtained using a varimax rotation of the first four factors in a principal components analysis. Factor loadings are presented in Table 3. In the first analysis, items loading on factor A are of a similar content in that

they deal with the child's attitudes toward a non-threatening or non-evaluative social environment, while items loading most strongly on the factor B appear to involve attitudes toward an authoritarian, coercive or evaluative social environment. In the second analysis, each of the above factors appears to have been subdivided into two components; however, these components do not seem to have a clearly identifiable common content. (Sex of the focal figure in the item was investigated and found to be unrelated to any of the factors.) The factors cut across the four subscales of the PSAS; thus none of the four subscales represents a pure factor.

However, since each of the subscales represents a common content area, and since the factors are not strong ones, we decided to continue with the development of the four subscales of the instrument.

Item Analysis

Item scores on the PSAS for 500 second grade summer Head Start graduates from the Westinghouse study were subjected to item analysis. Item means, standard deviations, and product moment correlations of item scores with subscores are presented in Table 4. For a number of items (e.g., item 14) the item mean is higher than is desirable, while the item standard deviation is relatively small. Item subscore correlations are not markedly low. It would seem that the major effort in item revision should be directed toward improving the distribution of responses to the item, this placing item means nearer the middle of the response range and increasing the item variances.

Present Study

The overall objective of the present research program beginning on March 15, 1972, and to end June 30, 1973 was to increase the usability, reliability and validity of the Purdue Attitude and Self Concept Instruments for primary grade children. Since the scales were originally developed for primary grade children, it was thought best to continue to improve them for children at this level before extending them downward to include preschool children (or developing an alternate set of such tests for preschool children).

Table 3. Factor Analysis of PSAS Items

		FACTOR LOADINGS					
		First Analysis Oblique Rotation		Second Analysis Varimax Rotation			
	Item	Factor A	Factor B	Factor I	II	III	IV
1.	Peers	.35	.01	.46	-.04	.00	.15
2.	School	.43	.02	.51	-.20	.27	.07
3.	Society	.42	.01	.42	.03	-.11	.28
4.	Home	.31	.25	.55	.17	.19	-.10
5.	Society	.37	.06	.30	.08	-.07	.33
6.	Peers	.14	.27	.17	-.11	.61	.02
7.	Home	.37	.16	.56	.05	.00	.09
8.	School	.20	.28	.21	.29	.05	.12
9.	Peers	.21	.30	-.01	.33	.07	.44
10.	Home	.26	.24	.33	.21	.12	.10
11.	Society	.37	.23	.32	.10	.22	.26
12.	School	.26	.30	.36	.34	-.01	.09
13.	Home	.20	.39	.18	.31	.26	.10
14.	Society	.44	.13	.16	.00	.03	.65
15.	Peers	.17	.38	.24	.55	-.09	.03
16.	School	.49	.16	.22	.07	.12	.59
17.	Society	.44	.27	.51	.27	.07	.20
18.	Peers	.45	.09	.39	-.06	.18	.18
19.	School	.27	.40	.14	.31	.27	.29
20.	Home	.04	.45	.18	.28	.51	-.17
21.	School	.31	.31	.24	.38	.14	.05
22.	Peers	.32	.28	.47	.12	.20	.00
23.	Society	.08	.35	-.08	.53	-.04	.17
24.	Home	.01	.45	.10	.51	.28	-.19
25.	School	.35	.32	.28	.23	.26	.30
26.	Home	.06	.43	-.05	.47	.26	.07
27.	Peers	.36	.16	.06	-.06	.41	.49
28.	Society	.50	.09	.40	-.06	.08	.41
29.	Home	.06	.50	-.07	.29	.52	.18
30.	Peers	.25	.35	.16	.29	.42	.08
31.	School	.15	.40	-.14	.53	.15	-.11
32.	Society	.17	.31	.07	.14	.50	.18

Table 4. Item Analyses of PSAS for 500 Head Start Graduates

Item #		Item Mean	Item SD	Correlation of Item With Subscore			
				Peers	School	Home	Society
1.	Peers	2.62	.71	.48	--	--	--
2.	School	2.36	.71	--	.44	--	--
3.	Society	2.60	.71	--	--	--	.54
4.	Home	2.29	.79	--	--	.57	--
5.	Society	2.51	.75	--	--	--	.55
6.	Peers	2.36	.77	.49	--	--	--
7.	Home	2.30	.77	--	--	.47	--
8.	School	2.48	.73	--	.50	--	--
9.	Peers	2.58	.75	.49	--	--	--
10.	Home	2.53	.73	--	--	.50	--
11.	Society	2.45	.76	--	--	--	.59
12.	School	2.27	.81	--	.60	--	--
13.	Home	2.32	.79	--	--	.55	--
14.	Society	2.78	.58	--	--	--	.52
15.	Peers	2.30	.83	.54	--	--	--
16.	School	2.69	.67	--	.57	--	--
17.	Society	2.47	.75	--	--	--	.51
18.	Peers	2.70	.66	.47	--	--	--
19.	School	2.43	.77	--	.55	--	--
20.	Home	2.02	.75	--	--	.64	--
21.	School	2.37	.75	--	.56	--	--
22.	Peers	2.48	.74	.60	--	--	--
23.	Society	2.11	.85	--	--	--	.45
24.	Home	1.93	.72	--	--	.57	--
25.	School	2.46	.77	--	.62	--	--
26.	Home	2.24	.81	--	--	.56	--
27.	Peers	2.77	.59	.53	--	--	--
28.	Society	2.67	.64	--	--	--	.55
29.	Home	2.22	.84	--	--	.57	--
30.	Peers	2.58	.70	.54	--	--	--
31.	School	1.49	.69	--	.45	--	--
32.	Society	2.38	.84	--	--	--	.51

The importance of such instruments for the Office of Economic Opportunity are threefold:

1) These tests can be used in evaluating preschool intervention programs in two important noncognitive areas during the follow-up phase of such studies when the children are in the primary grades.

2) These tests can be administered in small groups and hence can be an efficient procedure for evaluation.

3) These instruments can also be individually administered and used with an interview procedure to determine the reasons for the child's responses; this may provide other clues to the dynamics of a child's personality. This would be helpful in diagnosing in greater detail the effects of a particular intervention program.

Initial Phase of Study

The initial phase of the study was begun on March 15 and ended June 15, 1972. The second phase will begin in September, 1972 and continue until June, 1973.

Since time and money were limited, priorities had to be set, and it was decided that work would begin with the attitude scales.

The initial phase of the study involved a pilot study with approximately 20 students to give the three research assistants a warm-up or "feel" for the instrument, and to determine (1) whether the scale was feasible in its present form with pre-school children and (2) whether the number of options for each item should be extended from three to five. Three research assistants were employed and the procedure was to administer the tests on an individual basis combined with observing and interviewing the child to obtain the kind of information needed. Half the children were preschoolers and the other half, primary grade children. Also, some of the children were given the test with a three-point scoring system, while others used a five-point scoring system.

Field experience led to the general conclusion that the present instruments would need much revision (or the development of an alternate set of items) for use with preschoolers. Major difficulties were: certain story themes of the attitude scale items are outside the normal experience of preschool children; it was difficult for preschool children to verbalize their reason for choosing a certain answer; some of the captions connected with a particular story were above the language level of the preschool child; their attention span did not hold up well for such a long test; they

tended to respond to irrelevant aspects of the pictures rather than the theme of the stories; and they were not able to conceptualize the implicit themes of the stories.

On the other hand, the feeling was that the instrument was well adapted to primary grade children and the above issues were not major problems at these age levels.

The original instrument used three response alternatives for each item; a smiling face, neutral face, and a face with downturned mouth (sad or angry).

However, in the Westinghouse study, there was some evidence that a ceiling effect existed; scores were piling up at the positive end of the scale, and consequently this reduced the ability of the instrument to finely discriminate between those who had greater degrees of positive response.

In the pilot administration, nine children used a three-point scoring and nine children used a five-point scoring systeem. The total number of responses given by the children over the entire test to each of the response alternatives was:

Three choice item		Five choice item	
Happy	206	Most Happy	124
Neutral	49	Happy	82
Sad	33	Neutral	49
		Sad	16
		Very Sad	17

From this small sample one can observe that the "happy" response is most frequently used; however, the skewness declines at the range of alternatives is increased. The percentages of responses to the most extreme "happy" category shifts from approximately 70% to 40% as response alternatives are increased from three to five; similar discrimination is made at the negative end of the scale. We concluded that a five-point scoring system would be more effective in increasing the range of children's scores and hence improving the discrimination between them. It was assumed that this would also be the case with a larger sample.

Tryout

The work between March 15 and June 15 was an extension of the pilot phase. Sixty subjects from a local school system were tested, 20 children from each of the first, second and third grades. These children were

predominantly from middle class families. The basic procedure was to individually administer the attitude scales to the children, observe their reactions, and interview them as to why they responded the way they did. The children's responses to the test and interview and the reactions of the experimenters were recorded and used to answer questions concerned with usability, reliability and validity.

Usability

Usability of an instrument is concerned with the ease of administering, scoring and interpretating the test.

Ease of Administration

a) Format. The present format of the test presents the four frames of an item on an 8 1/2 x 11 sheet of paper. The first two frames are at the top and the last two at the bottom of the page. During the tryout, we noticed that some children would lose the theme of the story, or get confused about the identity of characters, or lose their attention as they shifted their gaze when going down and to the left in observing the third frame. It was felt that their attention and continuity of thought would be better maintained if the format were changed whereby the four frames followed in a linear sequence. This has been incorporated in the new edition which is now shortened in height but longer in width.

b) Instructions. The instructions were adequate for both examiner and examinee. However, it was felt that a paragraph was needed to clarify to the examiner that the procedure was the same for group and individual testing. The following paragraph was added to the instructions:

> This test is intended for small group administration. While the largest group size in which it is feasible to administer the test has not been established, it is presently recommended that groups be no larger than 10-12 children.
>
> If the test is to be used for individual administration, the same instructions are to be followed.

We considered the possibility of a separate answer sheet for individual administration so that the booklet could be used over again, but this idea was discarded since the child's responses may differ when he marks them in the booklet compared to the situation where he gives his responses to the examiner (orally or by pointing) and having the latter mark them on the answer sheet. In short, the child may give what he perceives as a more

socially desirable response if the examiner marks it for him.

Ease of Scoring

There are small rectangular boxes under each of the five faces for each test item, and the child simply places an "x" in one of the boxes. The scoring is relatively easy in that each item is scored from one to five, and the examiner merely sums the point scores for each of the appropriate items to obtain a given subtest score.

To facilitate hand-scoring, a scoring sheet was developed involving four columns. The columns were labeled Peers, Home, Society or School with the appropriate items listed for each category. The items in the booklet were labeled by number and one of four letter subscripts (p, h, sc, so) representing peers, home, school, and society. The same coding scheme identified the items on the scoring sheet.

Once the scores for each item are transferred to the scoring sheet, they can be quickly summed to determine the subscores.

Ease of Interpretation

At the present time, there are no problems in interpreting the meaning of raw scores since we have not yet reached the stage of developing norms.

Reliability and Validity

In the present tryout no direct reliability or validity studies were carried out on the instrument. A first priority was given to the identification of items needing revision. To this end, a comprehensive item analysis was carried out which in turn is directed toward increasing the internal consistency reliability and to some extent the construct validity of the instrument. In short, items were identified (according to various criteria) that needed to be revised if they were to make their proper contribution to the test and hence increase reliability and validity.

Item Analysis

Item analysis involved analyzing the items for congruence between reasons for the childrens responses to the item and the subjective intent of the item, item clarity, item discrimination and adequate response frequency to each response alternative for each item.

Congruence Between Item and Subjective Intent of the Item

Each item (and the frames representing that item) is based on a theme, i.e., the subjective intent of the item. Presumably a child should respond negatively or positively to an item for reasons that are consistent with this basic theme rather than some totally different theme.

This was investigated through interviewing each child and asking him the reasons for his responses. For each item, the reasons were coded into content categories and it was determined whether the majority of reasons fell into categories that were consistent with the overall theme. It would be difficult to identify any particular percentage level that could be used to judge an item as adequate. However, if the percentage were very high, the item would be considered "valid" in that frames of reference were consistent with the general intent of the item; if a high percentage of children were responding from a different frame of reference than intended, the item would be clearly inadequate. For example, in item 26, Phil comes home from school, and when he opens the door, his mother asks him why he is home from school so early. The child completes the story by indicating how he thinks Phil's mother felt. The basic intent or frame of reference of the item was for Phil to see his mother as having positive or negative feelings toward him. However, only 37% of the children had a frame of reference consistent with this intent; 28% thought Phil's mother reacted positively or negatively toward him because of something bad that Phil did in school, thus confounding mother's feelings with the school situation; and 23% of the children thought the mother felt positively or negatively toward Phil because he came home unexpectedly early. These basic differences in frames of reference made it necessary to revise this item. (See Tables 5, 6, 7, 8 for the differences in frames of reference.)

Item Clarity

Item clarity is concerned with ambiguity in meaning of the themes of the item, reaction of subjects to irrelevant aspects of the pictures (e.g. selecting an answer based on the facial expression of the person in the picture rather than on the theme), and ambiguity in the captions connected with the pictures. Based on the interviews with the children, it was felt that some children were responding to irrelevant cues in some of the pictures.

Table 5. Analysis of Items in Peers Subscale

Item No.	Response Frequency to Item Alternatives[a] 5	4	3	2	1	Standard Deviation	Item Correlation With Subscore	Item Discrimination M_{diff}[b]	f	Interviewer Judgment
1	31	19	5	3	2	1.03	.52	1.36	3.54	Eliminate mouth on faces. Subjects may be responding to smile.
6	34	11	7	7	1	1.14	.41	1.22	3.09	OK
9	31	15	2	7	5	1.33	.57	2.20	5.75	OK
15	15	13	14	10	8	1.38	.51	1.72	5.04	OK
18	47	10	1	2	0	.67	.53	.74	2.65	Revise. Not sufficient opportunity for a negative response.
22	30	15	4	6	5	1.27	.60	1.69	3.87	OK
27	46	10	2	2	0	.71	.53	.80	2.80	Revise. Not sufficient opportunity for negative response.
30	23	22	9	4	2	1.12	.46	1.29	3.27	Revise wording in caption. Not clear to subject.

a. The most positive response alternative is "5".

b. Low score subtracted from high score.

Table 5, continued.

Item No.	Frame of Reference (Subjective intent of item)	% of Responses Consistent with Intended Frame of Reference	Diagnosis and Recommendation for Revision[d]
1	Sally showed a positive or negative social response to the girl approaching her.	13% irrelevant[c] 87% relevant	Item meets all criteria satisfactorily. Keep item as is.
6	Jerry showed a positive or negative response to his mother's suggestion.	3% irrelevant 45% responded as approval of Mother's idea 50% relevant	Inconsistent frame of reference. Many subjects responding to mother rather than peers. Item-total score correlation slightly low. Revise by removing mother from story.
9	Don is willing (or not willing) to conform to rules in order to play with group.	2% irrelevant 98% relevant	Item meets all criteria satisfactorily. Keep item as is.
15	Carl sees boys happy or sad because he sees boys accepting or rejecting him.	16% responds in terms of Carl 84% relevant	Inconsistent frame of reference. Many subjects respond from Carl's point of view rather than other boys. Revise 4th frame by asking, "Which face is Carl's?"
18	Janet happy or unhappy to see kids in her class.	7% irrelevant 93% relevant	Too many positive responses, small standard deviation, low item discrimination. In frame 3, remove friendly greeting of children & change caption to "Janet sees them looking at her."
22	Child sees peers approving or disapproving of Alice depending on judgment of Alice's work.	5% irrelevant 95% relevant	Item meets all criteria satisfactorily. However, Alice's drawing in frame 3 removed as possibly leading to irrelevant responses.
27	John is happy or sad to play with other boys.	2% irrelevant 98% relevant	Too many positive responses, small standard deviation, low item discrimination. In caption of frame, have John ask to play instead of being invited to play.
30	Peggy is happy or unhappy to include more children in group.	7% irrelevant 93% relevant	Item meets all criteria satisfactorily. However, based on interviewer judgment, simplify wording in caption of frames 1 and 3.

c. Irrelevant refers to "don't know", no response, or the subject responds to some physical aspect of the picture.

d. In the revision, eyebrows and mouth expressions were removed from all figures.

Table 6. Analysis of Items for School Subscale

Item No.	Response Frequency to Item Alternatives[a] 5	4	3	2	1	Standard Deviation	Item Correlation With Subscore	Item Discrimination M_{diff}[b]	t	Interviewer Judgment
2	24	13	20	1	2	1.05	.55	1.46	4.32	Eliminate smile, Subject responds to smile.
8	19	14	21	4	2	1.08	.26	.86	2.35	Eliminate the word "Well" from frame 3.
12	11	9	19	14	7	1.27	.48	1.42	3.11	OK
16	47	10	2	1	0	.61	.33	.65	2.85	Revise item. Too many highly positive responses It was obvious that children would feel privileged to sit by teacher.
19	22	14	9	9	6	1.37	.63	2.05	5.66	OK
21	25	14	10	8	3	1.24	.55	1.52	4.06	OK
25	27	21	6	4	2	1.15	.55	1.60	3.82	Revise item; conflicting frames of reference.
31	0	2	8	19	31	.93	.24	.56	1.69	OK

a. The most positive response alternative is "5."

b. Low score substracted from high score.

Table 6, continued.

Item No.	Frame of Reference (Subjective intent of item)	% of Responses Consistent with Intended Frame of Reference	Diagnosis and Recommendation for Revision[d]
2	Positive or negative attitude toward going to school	18% irrelevant 82% relevant	Eliminate rising sun as some children responded to Bobby's early arrival at school.
8	Positive or negative attitude toward spending free time at school.	8% irrelevant 92% relevant	Since correlation and discrimination were low it was hypothesized that frame 2 confounded peer influence with theme in story. Substitute teacher for pupil in story. Simplify wording.
12	Child anticipates principal's approval or disapproval.	2% irrelevant 98% relevant	Use item as is.
16	Positive or negative attitude to being near teacher.	2% irrelevant 98% relevant	Too many positive responses, small standard deviation, low item-subscore correlation, low item discrimination. Have Kathy ask to sit next to teacher rather than be invited.
19	Dave has positive or negative attitude toward his school.	10% irrelevant 90% relevant	Use item as is.
21	Child anticipates approval or disapproval by teacher.	3% irrelevant 97% relevant	Use item as is.
25	Positive or negative attitude toward participation in class.	7% irrelevant 18% food related 75% relevant	Inconsistent frame of reference. Some children responded to food preferences rather than school task. Revise wording in frame 2 to "each child's telling about something he did."
31	Anticipates teacher's acceptance or disapproval of his action.	8% irrelevant 55% concerned with paint damage 37% relevant	Low item-subscore correlation, low item discrimination. Inconsistent frame of reference, children responding to paint damage in story. Change paint to spilled crayon box. Make teacher look less militant.

c. Eyebrows and mouth expressions were removed in all items.

Table 7. Analysis of Items for Home Subscale

Item No.	Response Frequency to Item Frequencies[a] 5	4	3	2	1	Standard Deviation	Item Correlation With Subscore	Item Discrimination M_{diff}[b]	Item Discrimination t	Interviewer Judgment
4	26	21	8	2	3	1.07	.63	1.87	5.54	OK
7	31	15	10	3	1	1.01	.27	.75	2.39	Item confounds evaluation of home with school situation. Intent of item not consistent with intent of other items to measure feeling toward home.
10	28	21	9	4	0	.92	.41	1.14	4.32	Eliminate smile in Frame 1; Eliminate words "from school" in Frame 1
13	21	20	12	5	2	1.08	.56	1.50	4.71	OK
20	8	10	19	11	12	1.27	.59	1.76	4.96	OK
24	7	7	17	18	11	1.27	.46	1.37	3.25	OK
26	18	17	9	11	5	1.31	.27	.86	1.84	Change "early to "late" in first frame.
29	21	7	10	15	7	1.45	.54	1.84	3.92	Revise phraseology in captions.

a. The most positive response alternative is "5".

b. Low score substracted from high score.

Table 7, continued.

Item No.	Frame of Reference (Subjective intent of item)	% of Responses Consistent with Intended Frame of Reference	Diagnosis and Recommendation for Revision[c]
4	Joe shows a positive or negative reaction toward brothers and sisters.	10% irrelevant 90% relevant	Use item as is.
7	Hank sees parents accepting or rejecting his school work.	5% irrelevant 95% relevant	Low item-subscore correlation, low item discrimination. Intent of item confounds school and home. Change Hank's activity from school work to pasting pictures
10	Mary feels positively or negatively toward home.	23% irrelevant (Mostly concerned with words "from school" and Mary stopping in front of door. 77% relevant	Somewhat low item-subscore correlation. Inconsistent frame of reference. Captions provide irrelevant cues. Eliminate "From school" in frame 1, and substitute "She opens the door in frame 3.
13	Jill shows a positive or negative reaction toward interaction with father.	3% irrelevant 97% relevant	Use item as is.
20	Molly shows a positive or negative reaction toward being with family group.	3% irrelevant 97% relevant	Use item as is.
24	Betty expects a positive or negative reaction from mother.	3% irrelevant 97% relevant	Somewhat low item-subscore correlation. Change dropped "food" to "spoon" as some children concerned with wasting food.
26	Phil sees mother as having positive or negative feelings toward home.	12% irrelevant 28% confounded with evaluation of why Phil left school early. (Phil did something bad at school.) 60% relevant	Low item-subscore correlation, low item discrimination. Inconsistent frame of reference. Eliminate "from school" in frame 1, and mother's question in frame 3.
29	Tom's feelings about being accepted in his own house.	7% irrelevant 5% misunderstood dialogue 88% relevant	Change captions to simplify wording.

c. Eye brow and mouth expressions removed from all items.

Table 8. Analysis of Items for Society Subscale

Item No.	Response Frequency to Item Alternatives[a] 5	4	3	2	1	Standard Deviation	Item Correlation With Subscore	Item Discrimination M_{diff}[b]	t	Interviewer Judgment
3	36	19	4	1	0	.77	.37	.75	2.28	Revise item. Item not relevant to children's experience
5	35	15	8	0	2	.95	.55	1.02	3.43	Reduce number of people in Frame 3.
11	36	14	9	1	0	.83	.52	1.06	4.29	OK
14	43	12	4	1	0	.69	.43	.86	3.48	Revise item.
17	21	22	6	6	5	1.30	.68	2.29	6.22	Eliminate ball in pictures. Distracts subjects.
23	9	8	21	16	6	1.20	.29	1.02	2.38	Reword caption in Frame 2 to the following: He is sitting on steps crying.
28	39	17	3	1	0	.70	.41	.92	3.57	Revise item.
32	24	20	5	8	3	1.24	.29	.79	1.69	Eliminate smiles as irrelevant cues. Use "street" instead of "neighborhood". Eliminate "nice". Eliminate irrelevant cues.

a. The most positive response alternative is "5".

b. Low score substracted from high score.

Table 8, continued

Item No.	Frame of Reference (Subjective intent of item)	% of Responses Consistent with Intended Frame of Reference	Diagnosis and Recommendation for Revision[c]
3	Polly views neighborhood worker as favorable or unfavorable.	17% irrelevant 10% respond to wrong figure 25% react to delivery of package 48% relevant	Low standard deviation, low item-subscore correlation, low item discrimination. Inconsistent frames of reference. Change delivery man to repair man in frame 2; Have him go to door rather than to Polly
5	See neighbors reacting favorably or unfavorably to them.	20% irrelevant 80% relevant	Somewhat low standard deviation. Reduce people number in frame 3; Ask for Lynn's feelings in frame four.
11	Positive or negative attitude toward fireman.	7% irrelevant 93% relevant	Somewhat low standard deviation. Use item as is.
14	Positive or negative attitude toward neighbors.	3% irrelevant 12% respond to meeting at child's house 13% respond with expected good manners 72% relevant	Too many positive responses. Low standard deviation, low item-subscore correlation, low item discrimination. Inconsistent frames of reference. Eliminate the meeting from story.
17	Child sees neighbors positively or negatively	2% irrelevant 10% interpretated the neighbors presence as wanting to play ball 88% relevant	Inconsistent frame of reference. Eliminate ball from pictures.
23	Child sees policeman as having positive or negative attitude.	3% irrelevant 40% respond to older boys fighting 57% relevant	Item-subscore correlation low. Inconsistent frame of reference. Eliminate the "fight" from the story.
28	Sue views storeman as react-positively or negatively toward her.	3% irrelevant 37% respond to child shopping alone. This is outside of experience of many children. 60% relevant	Somewhat low standard deviation. Low item-subscore correlation. Low item discrimination. Inconsistent frame of reference. Have child accompany mother to store.
32	Rita reacts positively or negatively toward her neighborhood	10% irrelevant 90% relevant	Low item-subscore correlation. Low item discrimination. Change "neighborhood" to "street". In frame 3, ask "do you like your street?"

c. Eyebrow and mouth expressions removed from all items.

In some cases they were responding to expressions conveyed by mouths and eyebrows of faces, in other cases, the posture of the cartoon figure conveyed undesired meaning. Hence, facial characteristics were eliminated in the new edition, and the posture of the figures was altered in many of the items. Hair and characteristics of clothing were also changed to make the focal character more distinct. The wording in the captions of certain items was simplified to make it more understandable to children. (See Tables 5, 6, 7, and 8).

Item Discrimination

Although item discrimination is associated with achievement tests, it can also be applied in noncognitive instruments. Two methods were used to determine item discrimination. Although there is overlap, and both methods give essentially the same information, there is some additional information gained by using both approaches.

a. Determining the difference in mean scores for each item for those subjects whose total scores are in the top 27% compared to those in the lower 27%. Mean differences were found and a t-test used to determine if the differences were statistically significant.

b. Item-subscore correlation. The more a particular item correlates with the subscore, the more people with a high score answer the item one way, and people with a lower score answer the item in the opposite direction.

The more an item correlates with a total score, the more it will discriminate the high and low groups. One method reveals the degree of difference in the item mean score for the high scoring and low scoring groups; and the other method reveals the degree of correlation of the item with the subscore. In the former case, one gets a measure of the size of the difference separating the high and low groups on that item; in the latter case, one gets from the correlation coefficient an index of how similar an item is to the set of items making up the subscore.

(The results for each item are presented in Tables 5, 6, 7, and 8)

Adequacy of Response Alternatives for Each Item

It is important to analyze each item in terms of the alternate answers.

a) Response frequency to item alternatives. If all or most of the children choose the same response alternative to an item, then the item is not discriminating between individuals. Therefore, it is important that

the different response alternatives to an item be used. If not, an item should be revised in order to make other responses more probable. Tables 5, 6, 7, and 8 indicate the frequency with which each alternative has been chosen. If a particular alternative was selected more than 70% of the time, it was felt that the item was not discriminating sufficiently, and should be revised.

Standard Deviation of the Item

The standard deviation of the item is another way of determining whether response alternatives are being used. If there is a small standard deviation, it indicates that individuals are all clustered together and not using the different alternatives. However, examining the response frequencies for each alternative indicates which alternatives are being used most frequently, and may suggest how to revise the item so that children will use the other alternatives more.

Tables 5, 6, 7 and 8 indicate the standard deviation and response frequencies for the item.

On the basis of the above information various items were identified as inadequate and revised. Suggestions for revision are indicated in Tables 5, 6, 7 and 8.

Subscores and Total Scores

The distribution of the subscores and total score can indicate whether there is bimodality or skewness with associated ceiling and floor effects. The frequency distributions for the subscores and total score for the 60 subjects are presented in Table 9.

One can observe from the frequency distributions that the scores are spread out and even though the bulk of the scores indicate positive attitudes, there is little evidence of a ceiling or floor effect (i.e., the scores being clustered all in one end of the possible score range). There is adequate variation of the scores to indicate that the instrument does discriminate between individuals.

Common Interpretation of the Five Alternative Item Responses

Whether children would interpret the five faces as representing different degrees of affect was considered. This would be essential if their scores were to be meaningful.

Table 9. Frequency Distributions of PSAS Scores

Score	Frequency				Score	Frequency
	Peers	School	Home	Society		PSAS Total
40			1	1	150-152	1
39	3			1	147-149	
38	8			2	144-146	1
37	5	1	1	4	141-143	5
36	5	1		8	138-140	1
35	5	3	3	5	135-137	4
34	4	1	4	5	132-134	5
33	6	4	4	10	129-131	3
32	6	7	3	4	126-128	4
31	3	2	6	7	123-125	7
30	4	5	3	4	120-122	7
29	2	7	7	4	117-119	5
28	2	8	5	2	114-116	6
27		1	5	1	111-113	2
26	1	6	3	1	108-110	4
25	4	6	4		105-107	2
24	1	2	3		102-104	
23		2	4		99-101	
22		3	1	1	96-98	1
21					93-95	2
20			2			
19	1		1			
18						
17						
16		1				

During the depth interview, the children were asked for their interpretation of each face. Table 10 presents their responses. While the children gave a great variety of descriptions for the faces, there was a common core of agreement on the symbolic meaning of the faces, ranging from very happy to very sad (or mad). Individual children were indeed able to attach differentiated and meaningful verbal labels to the five faces, and to make appropriate use of the faces in responding to the items, as judged from the depth interviews.

Response Styles

There was no evidence of response style among the children of the study. Even though the majority of item responses were positive, children made use of all response alternatives as appropriate. They did not respond differentially to items involving male and female characters, or to items requiring direct or indirect identification with the character presented in the response frame of the item.

Subscores

Whether to retain or to reduce or eliminate the four subscores was considered. The advantage in keeping the subscores is their diagnostic value, i.e., one can assess the child's differences in attitudes toward school, home, peers and society. On the other hand, the subscores may not represent pure factors and be less reliable than a total or composite score would be.

For the pilot study sample, the intercorrelations were:

	Peers	School	Society
Home	.427	.575	.304
Peers		.539	.186
School			.460

The intercorrelations are sufficiently low to indicate that the subscores are not simply duplicating each other. On this basis, it was decided to keep the subscores even though there is overlap and they do not represent pure factors. It was felt that each of these subscores represented a common and important content area, and as such, they may have high predictive value regardless of whether they represent pure factors.

Table 10. Children's Interpretation of Item Response Alternatives

Description of Face	Frequency	Description of Face	Frequency
A. Face with Strongly Upturned Mouth: ◡			
Happy	26	Most happy	4
More happy	9	Happier	2
Happiest	2	Glad	1
Real happy	9	Most glad	1
Lots happy	1	Smiling face	1
Very happy	4		
B. Face with Slightly Upturned Mouth: ⌣			
Happy	19	Sort of gay	1
Little happy	13	Pretty happy	2
Sort of happy	7	Glad	3
Kind of smiling	1	Sort of glad	1
Kind of happy	5	Little grin	2
Not so very happy	1	Kind of proud	1
Not as happy	3	Worried	1
C. Face with Straight Mouth: —			
Not happy or sad	11	Regular	2
Kind of happy and sad	5	Doesn't know something	1
Kind of in between	2	Kind of bored	1
Normal	3	Tiny bit sad	2
Even smile	1	Little sad	5
Mixed up	1	Not sad	1
Not too happy	6	Kind of sad	5
Happy, somewhat	5	Worried	1
Sort of happy	3	Sort of mad	2
A little happy	2	Mad	1

Table 10. continued

Description of Face	Frequency	Description of Face	Frequency
D. Face with Slightly Downturned Mouth: ⁀			
Sad	28	Hurt	1
Little sad	8	Crying	1
Kind of sad	4	Kind of disappointed	1
Just sad	2	Sort of mad	2
Real sad	1	Pouting mad	2
Crying sad	1	Sort of angry	1
Frowning sad	2	Mad	1
E. Face with Strongly Downturned Mouth: ⌒			
Real sad	18	Unhappy	3
Sad	9	Crying	1
Sadder	7	Mad	4
Most sad	3	Real mad	2
Very sad	3	Angry	1
Saddest	3	Real Angry	1
Lots sad	1	Pouting	1
More sad	2	Grumpy	1

The internal consistency reliability coefficients (Cronbach's Alpha) for the pilot sample were: Home = .485; School = .464; Society ; .370; Peers = .580; and Total = .792. The reliability coefficients are low for this sample. However, this particular pilot study may not have been an adequate vehicle for assessing reliability since depth interviewing was used, and various cues may have inadvertently been given which affected the children's responses.

Subscore Data from Pilot Study

Group means on the four PSAS subscales for the first, second, and third grade children from the pilot study sample are presented in Table 11. These groups appear to have positive attitudes toward peers, school, home, and society, with higher scores on the School and Society subscales than on the Home and Peers subscales. (Whether the higher scores on these two subscales correspond to more positive attitudes toward school and society cannot, of course, be inferred from these data.) Also, scores on the Home and Society subscales show a decrease as grade level increases.

Table 11. PSAS Subscale Means for Pilot Study Sample

Grade Level	n	Subscale Mean			
		Peers	School	Home	Society
One	20	28.20	32.45	29.30	33.40
Two	20	29.00	34.26	28.47	33.16
Three	20	28.95	32.50	27.65	31.85

Revision of the PSAS

Each of the items making up the four subscales of the PSAS was carefully examined in terms of examiner's judgments, depth interviews, and the item analysis. While there are no absolute standards for accepting or rejecting items, the data allowed us to identify the relatively weaker items and in many cases suggested ways in which the items could be revised. Each item was revised in some way if it failed to meet standards of acceptability or was relatively weak on any one of the item criteria.

Every item in the PSAS was revised in at least the minor way of removing mouth and eyebrow expressions from the cartoons, and in many items

the postural or gestural attitudes of the figures or other aspects of the drawing were altered to remove unintended cues. In addition, the wording of the captions was simplified in many items to make it more easily understood by young children. Other items were more extensively revised in that the basic story-theme of the item was changed in order to eliminate irrelevant frames of reference, or to make the theme of the item more consistent with other items making up the subscale, or to make negative responses more likely.

Two new items were added to each of the subscales, thus making the entire PSAS 40 items in length. While increasing the length of the test would, of course, be expected to improve its reliability, it is felt that increasing the length still further would go beyond the limits of attention and endurance of primary grade children.

Finally, the Society subscale was re-named the Community subscale, since it was felt that this label would more accurately reflect the content of items in this subscale than the more abstract term "Society".

Appendix B contains a copy of the revised instrument.

Future Activities: (September to June, 1973)

1. The revised PSAS will be administered to a total sample of approximately 400 primary grade children composed of both middle- and lower-class children. Item analyses will be carried out and reliabilities computed. Any further revision or deletion of items will be made as warranted.

2. Validity studies will be carried out. Observations of children's behavior, sociometric data, and other test results will be correlated with PSAS scores. Also, the PSAS will be administered to groups hypothesized to hold different attitudes towards home, peers, school, and community.

3. Administration of the PSAS to selected norm groups will be begun.

4. Development of an extension of the PSAS suitable for use with preschool children will be explored.

5. Revision of the self-concept instrument will be begun.

Appendix A

Purdue Social Attitude Scales
Experimental Edition I

INSTRUCTIONS

This booklet contains 32 cartoon-type picture stories. The examiner will read the legend under each picture to the child. The child will then select the face which he thinks properly completes each story and place a pencil-mark in the small box under that face.

The test will take about 30 minutes, but there is no time limit. Proceed to the next item when all children have finished marking their choices. (Each page of the booklet is color-coded, so the examiner can readily see whether each child has the correct page before him.)

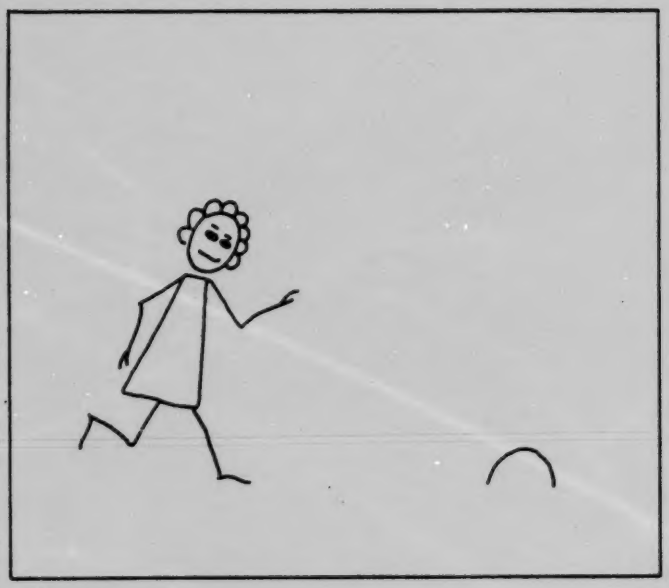
The examiner begins by reading the following statement to the children:

> Each page in this booklet has a little picture story. I will tell you what each picture is about, but you will need to finish each story the way you think it should be. (There is no "right" ending to the story--you just pick the ending you like.) Each picture represents a happy child, an uncertain child, or a sad child.
>
> Now, let's turn to the first page.

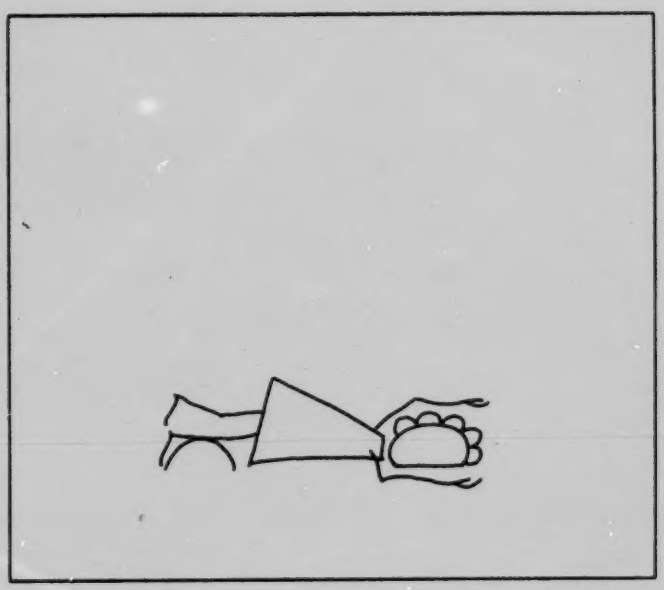
Check to see that all children have turned to the right page. Then read example. After reading example, check to see that each child has marked one and only one box.

Proceed with the test items in similar fashion.

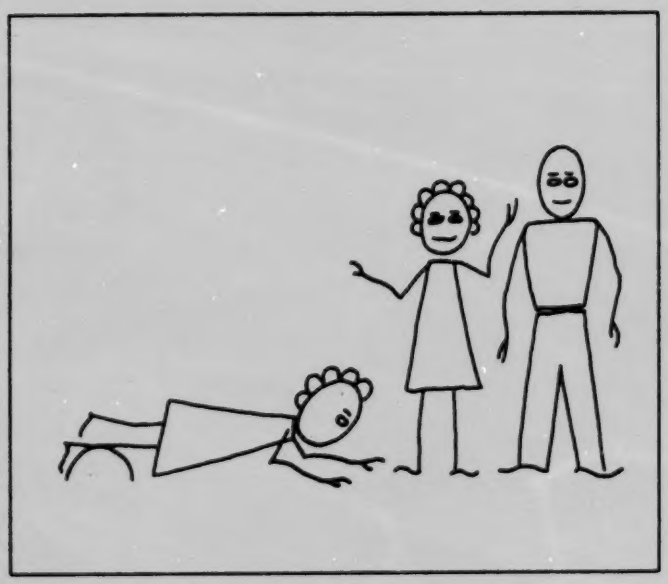
EXAMPLE



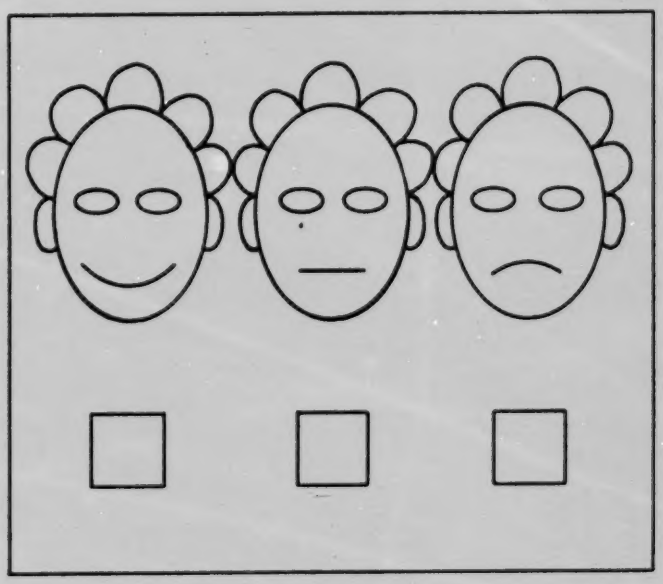
Mary is running.



She falls down.

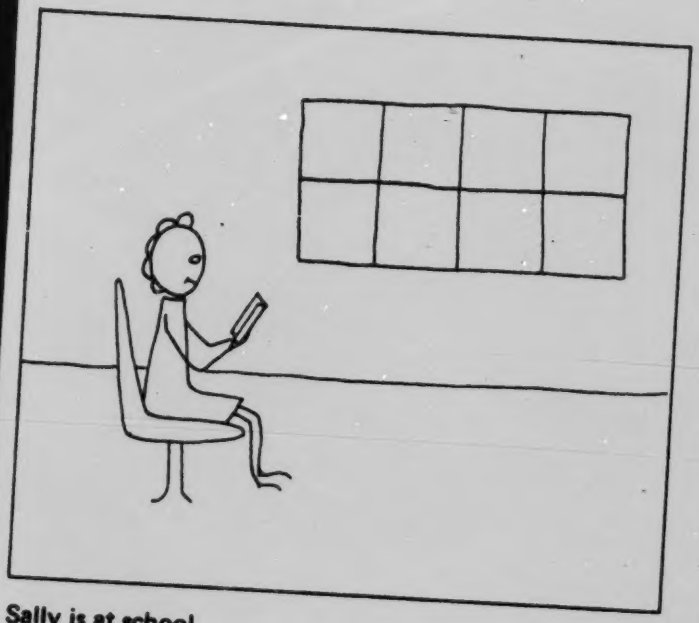


Some other children come to see what happened.

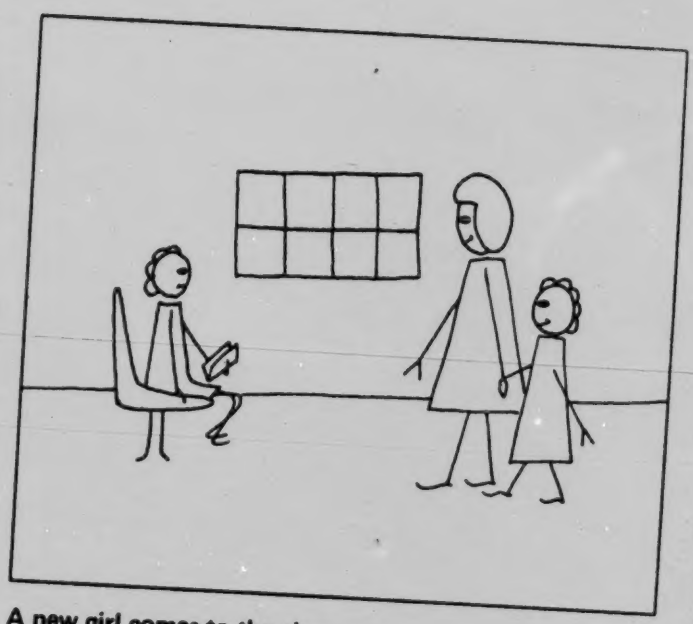


Now, you will need to finish the story.
Which face is Mary's face?
Take your pencil and make a mark in the little box under the face you think is Mary's.

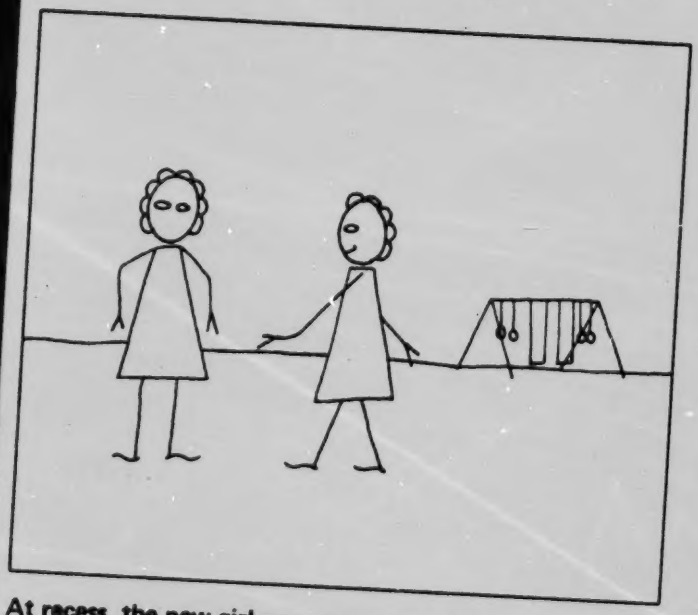
Item no. 1



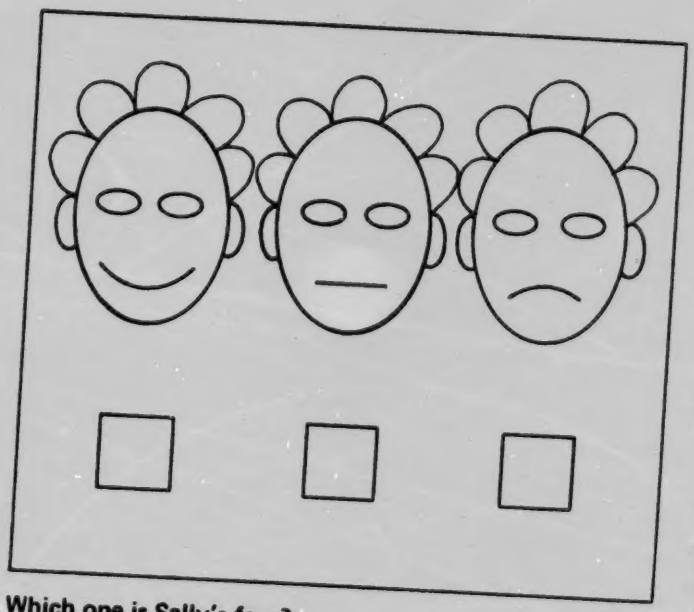
Sally is at school.



A new girl comes to the class.

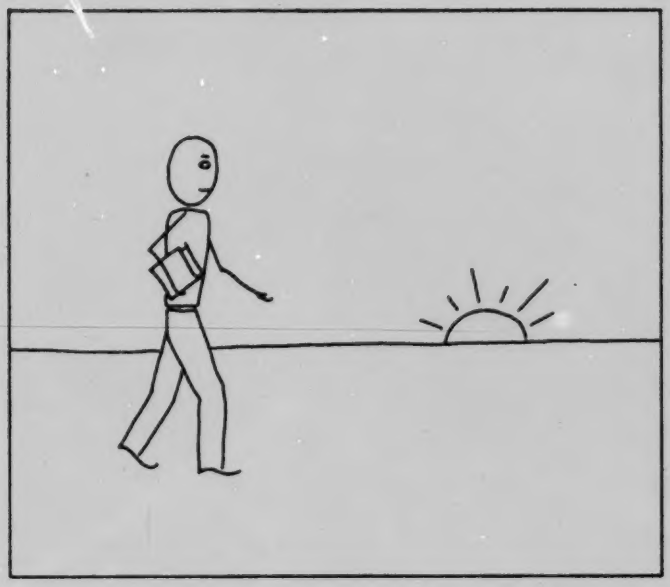


At recess, the new girl comes over to talk to Sally.

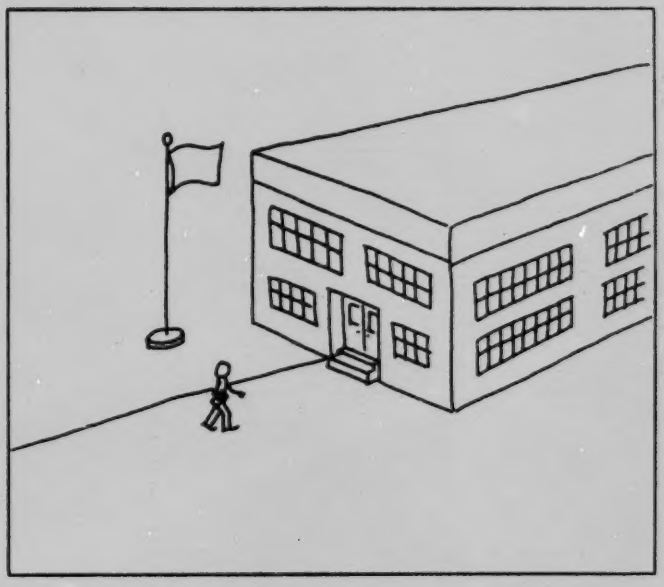


Which one is Sally's face?

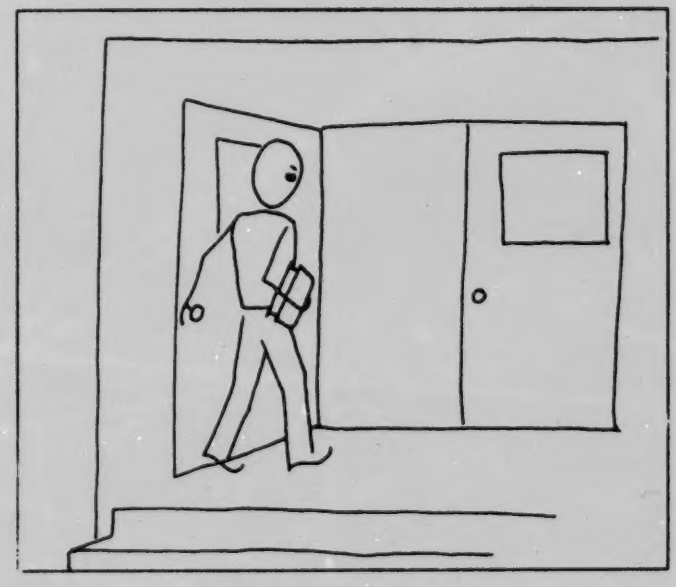
Item no. 2



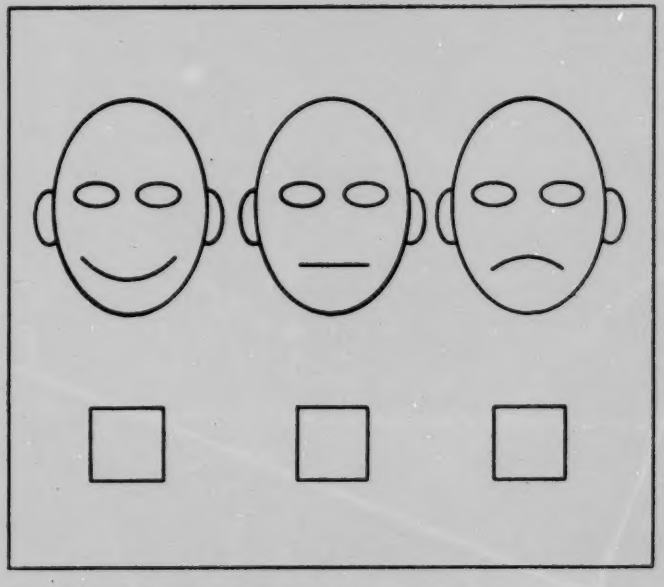
Bobby is on his way to school.



He gets to school.

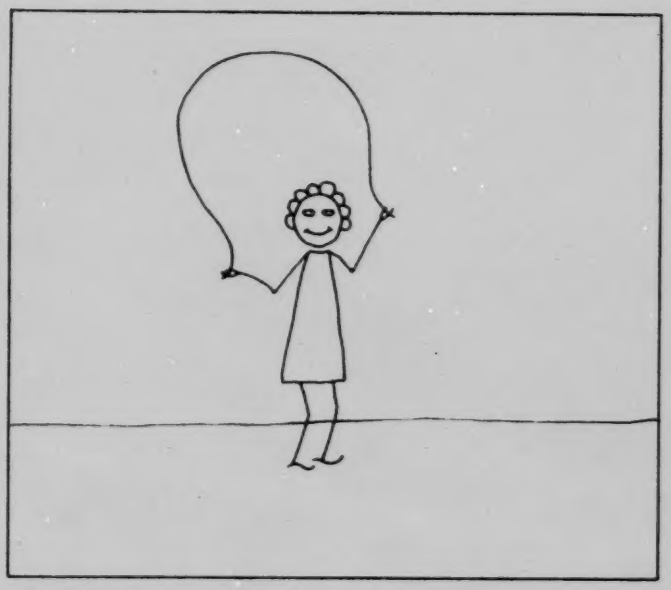


He opens the door and goes inside.

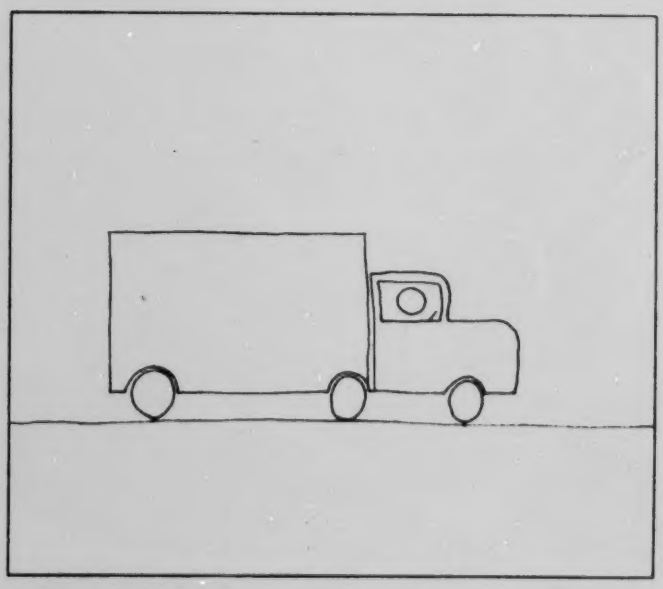


Which one is Bobby's face?

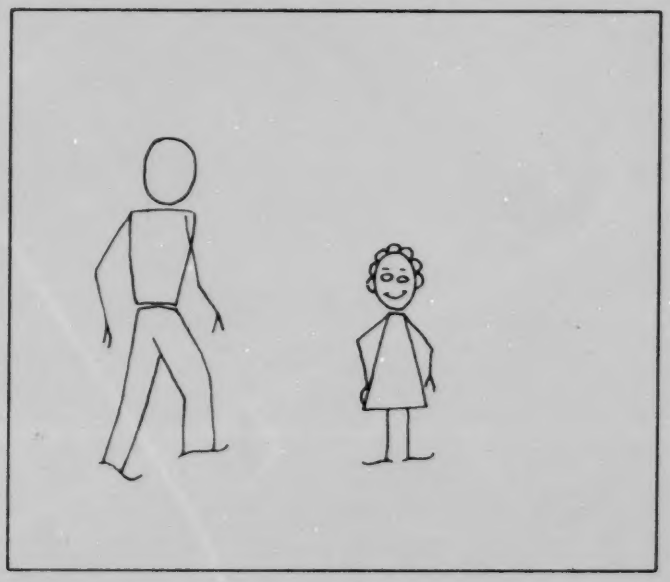
Item no. 3



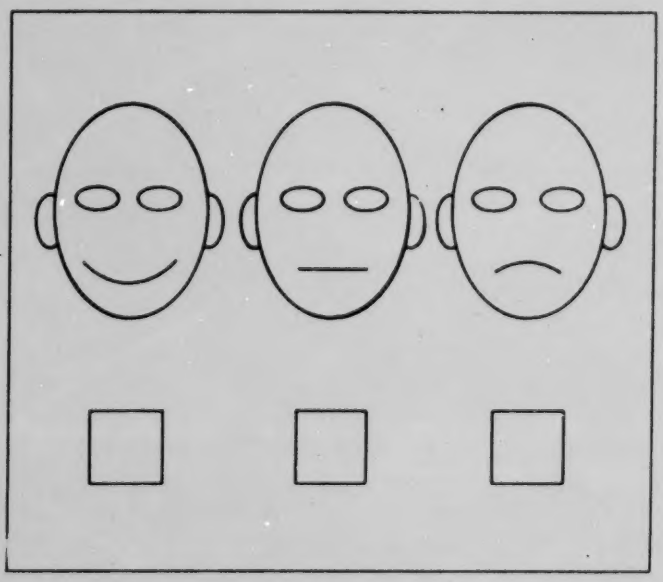
Polly is playing outside.



A delivery man drives up in his truck.

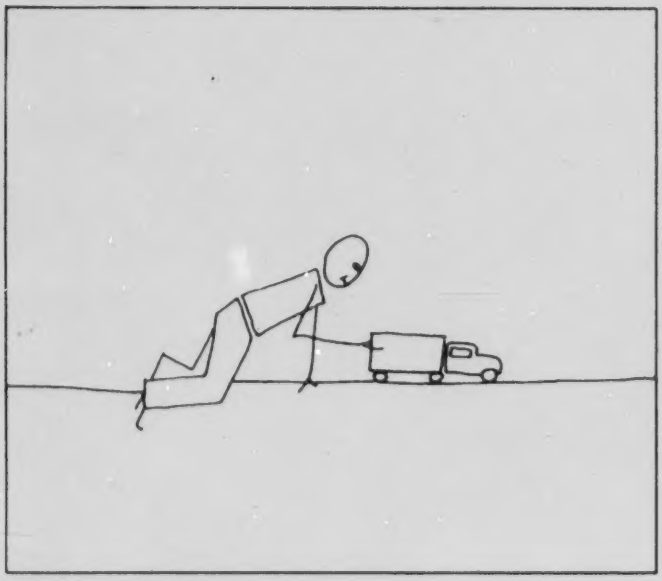


He comes over to Polly.

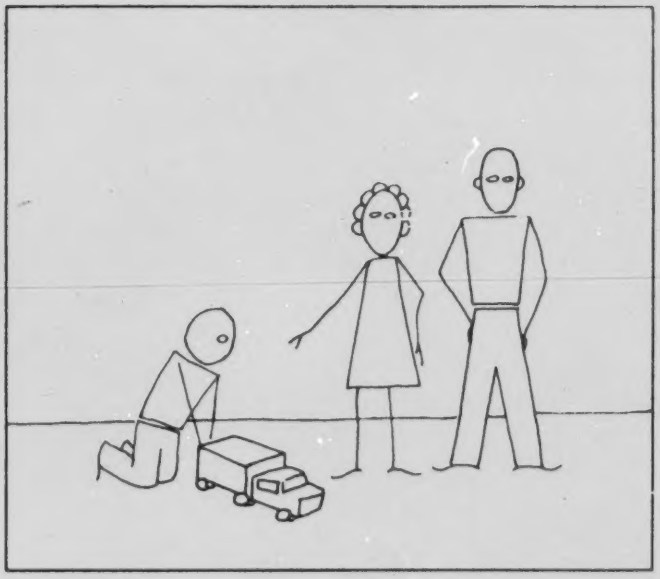


Which one is the man's face?

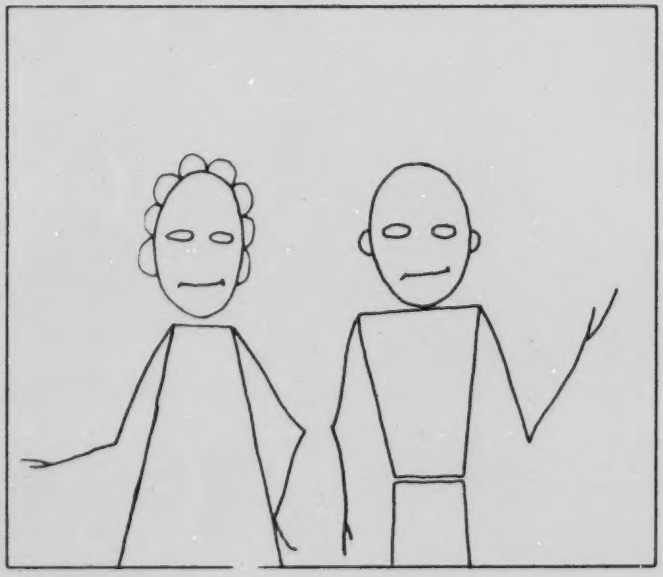
Item no. 4



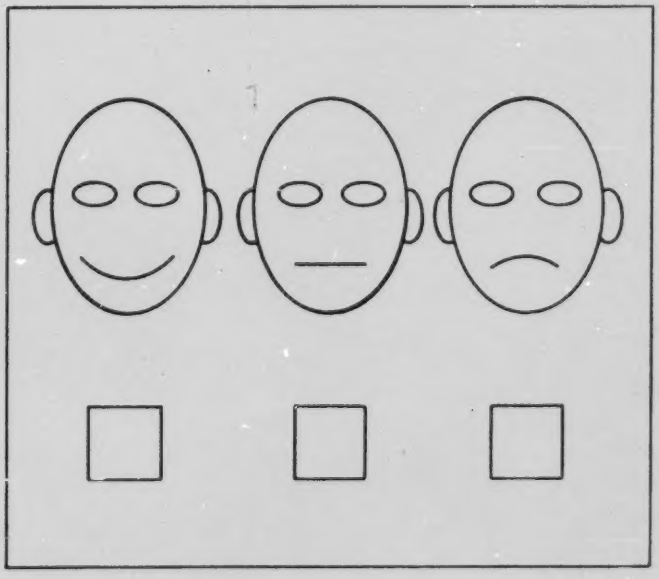
Joe is playing at home.



He sees his brother and sister coming.

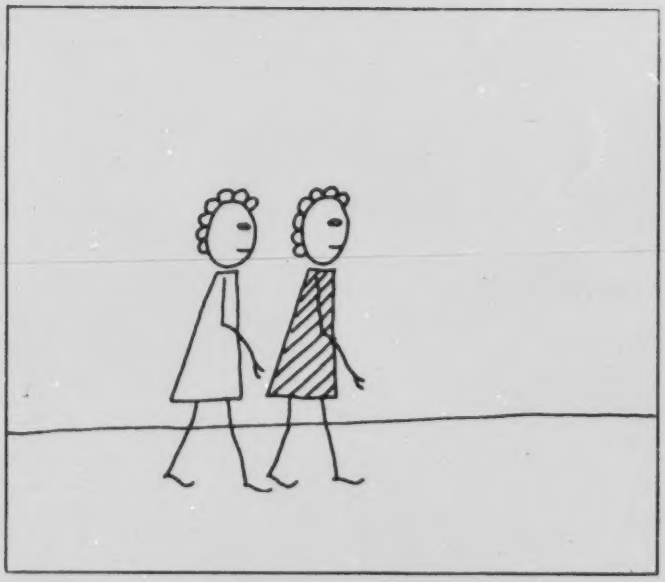


They say, "Joe, can we play too?"

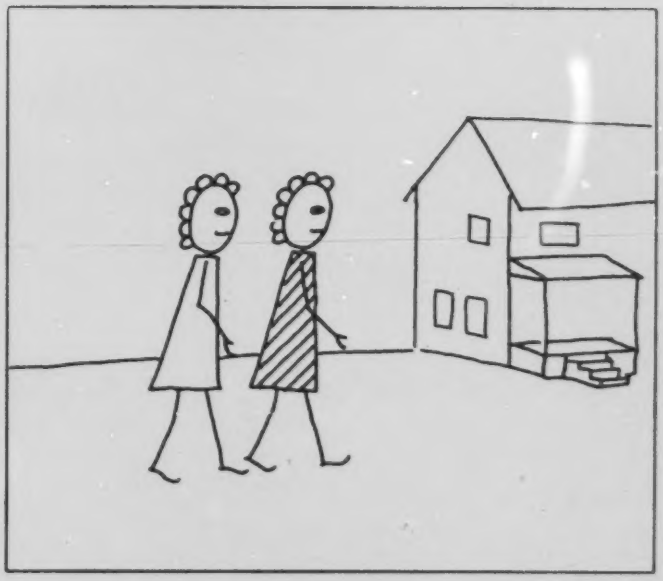


Which one is Joe's face?

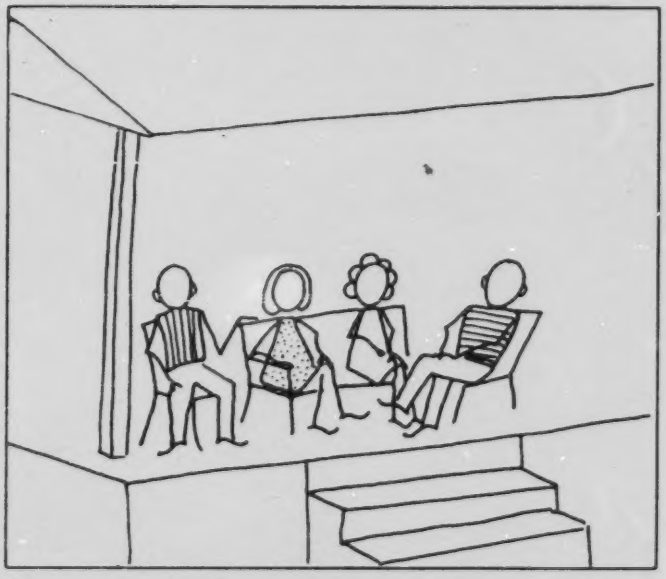
Item no. 5



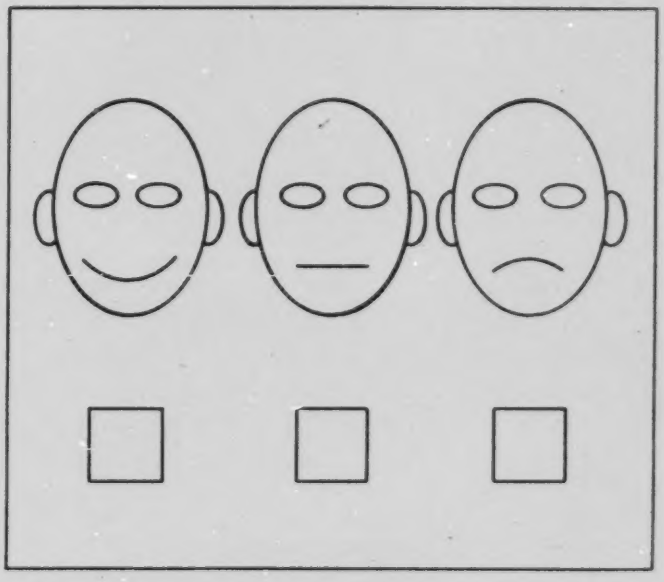
Lynn and her friend are walking to the store.



They pass a house in their neighborhood.

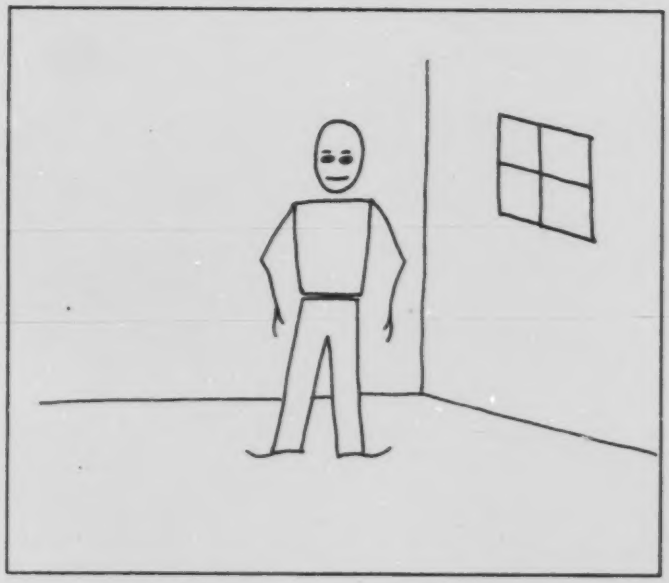


Some people are sitting on the porch. Lynn says, "Oh, they're looking at us!"



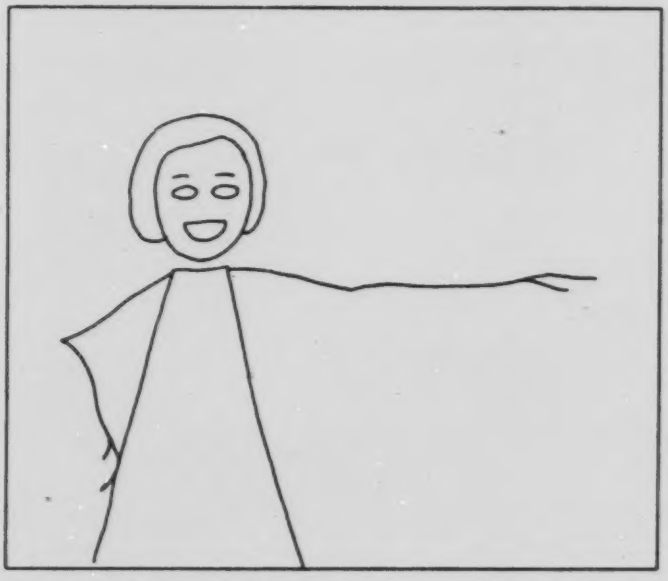
How do the people look?

Item no. 6

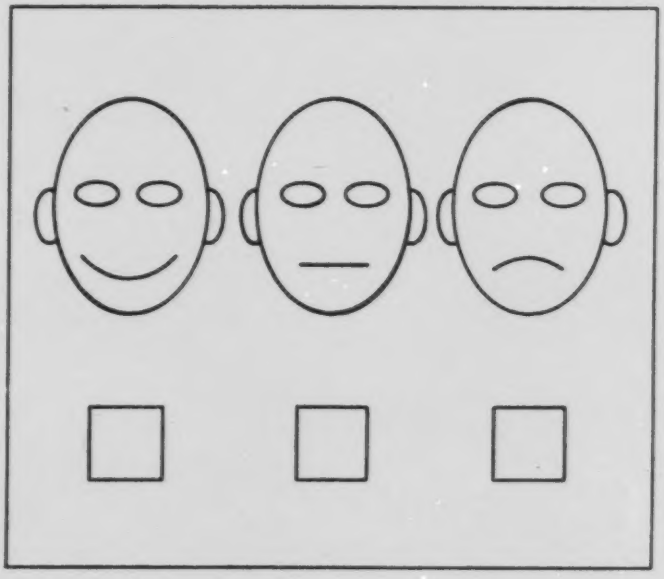


Jerry is at home.

He tells his mother, "I don't know what to do."



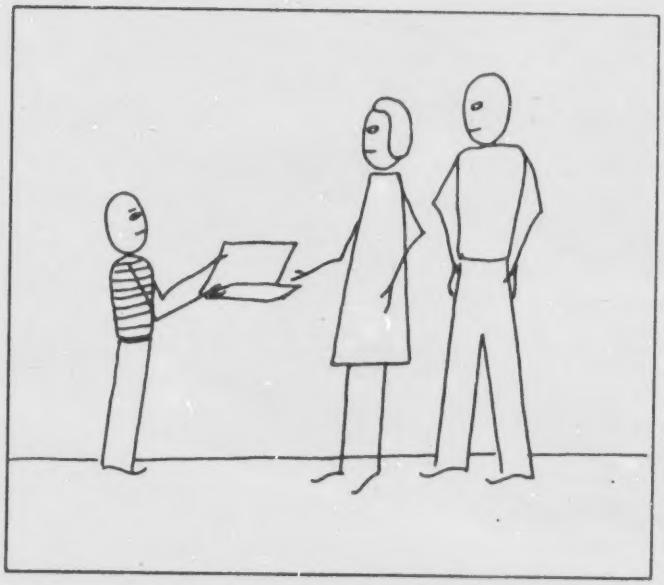
Jerry's mother says, "Go play with your friends."



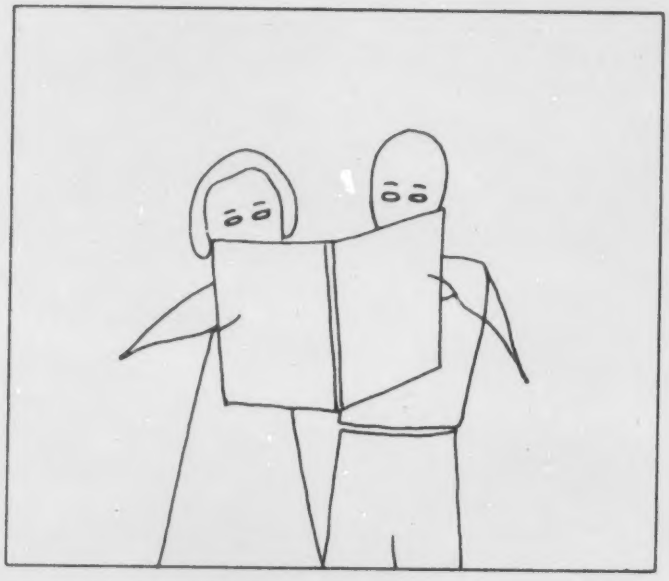
Which face is Jerry's?

Item no. 7

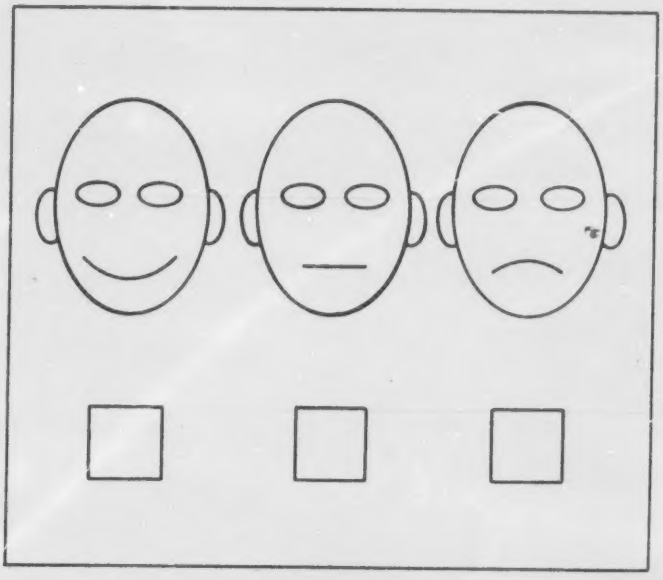
Hank takes some of his schoolwork home.



He shows it to his mother and father.

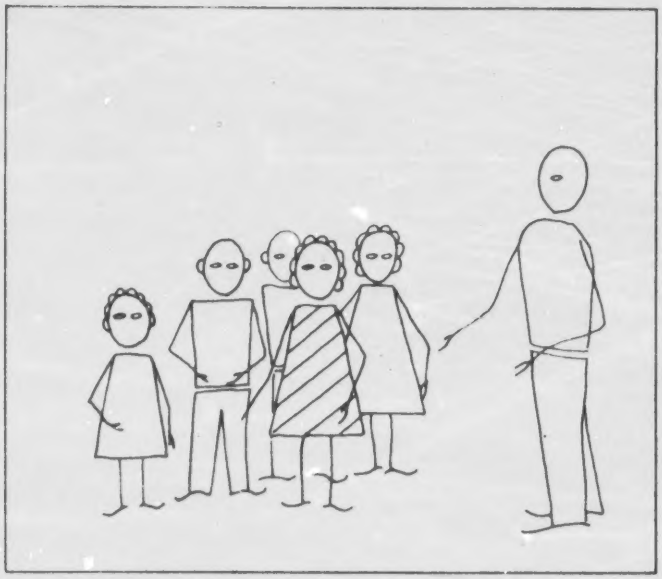


They look at Hank's work.



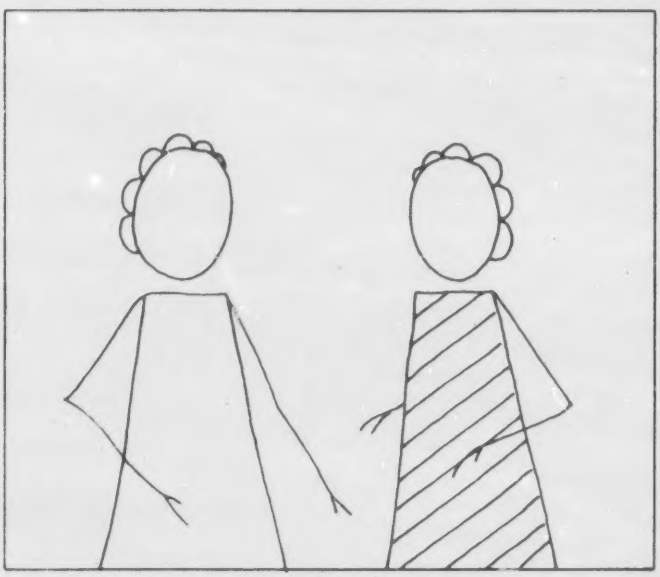
Which way do they look?

Item no. 8

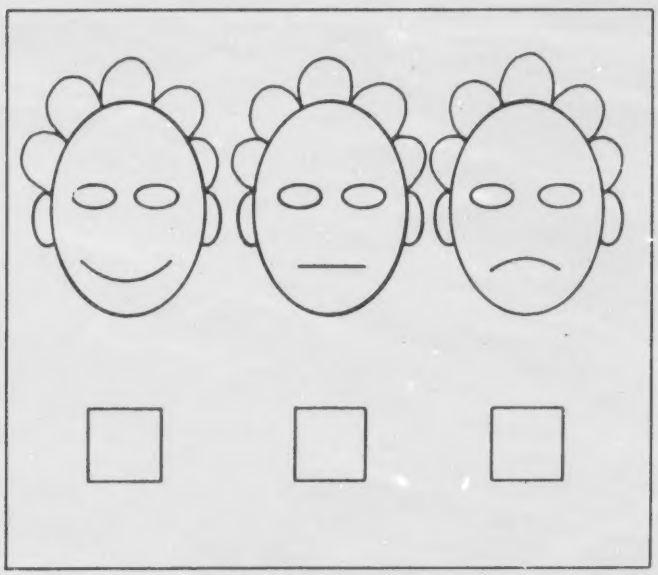


The principal says "From now on, the school will be open on Saturday morning for children who want to come to read, to play games, or to make things."

Karen says, "Oh Jane, that's a good idea. Let's come over here on Saturday."

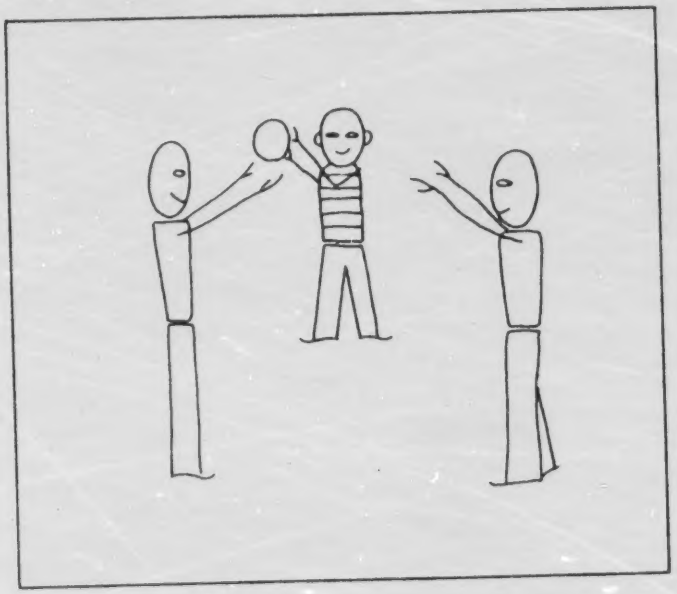


Jane says, "Well-----."

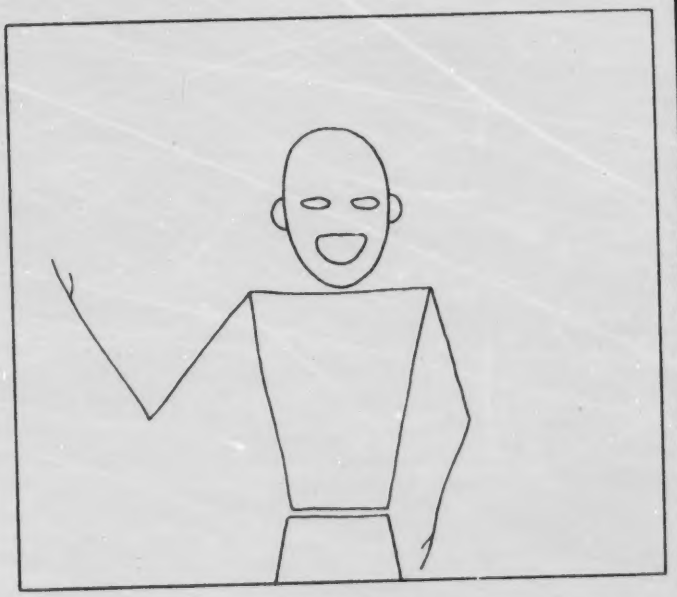


Which one is Jane's face?

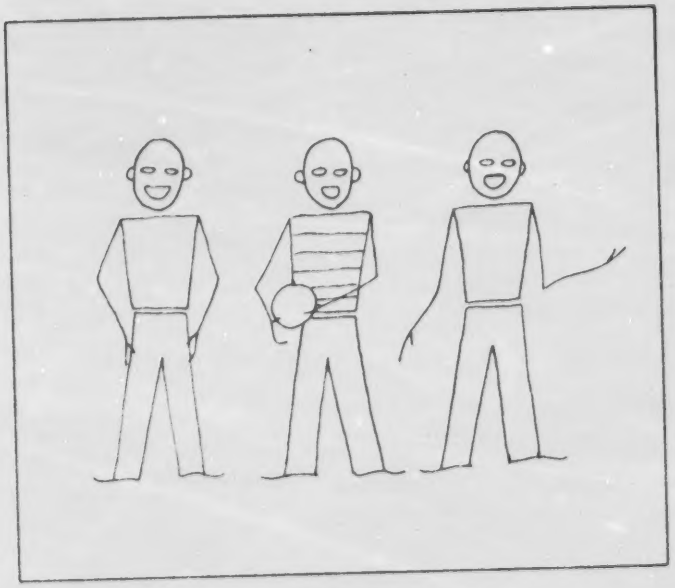
Item no. 9



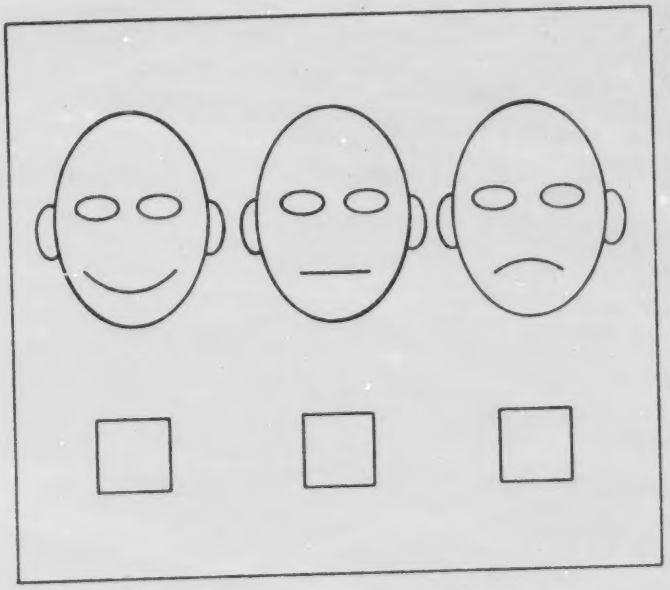
The boys are playing a game.



Don says, "I want to play the game with you."

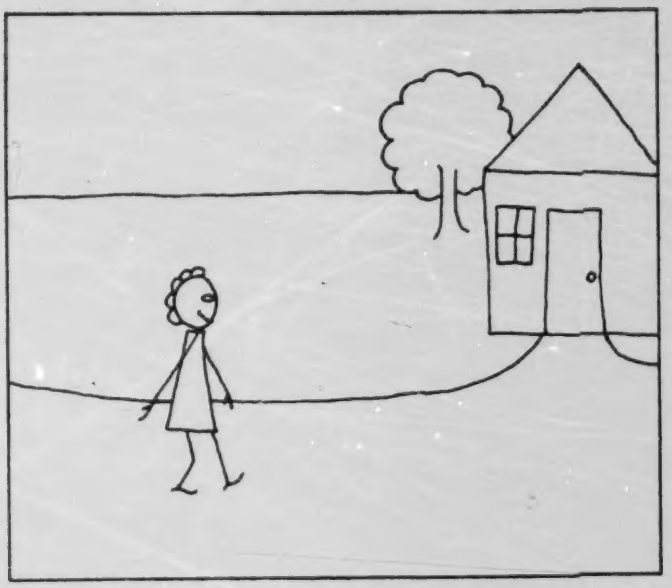


The boys say, "O.K., but you must obey all our rules."

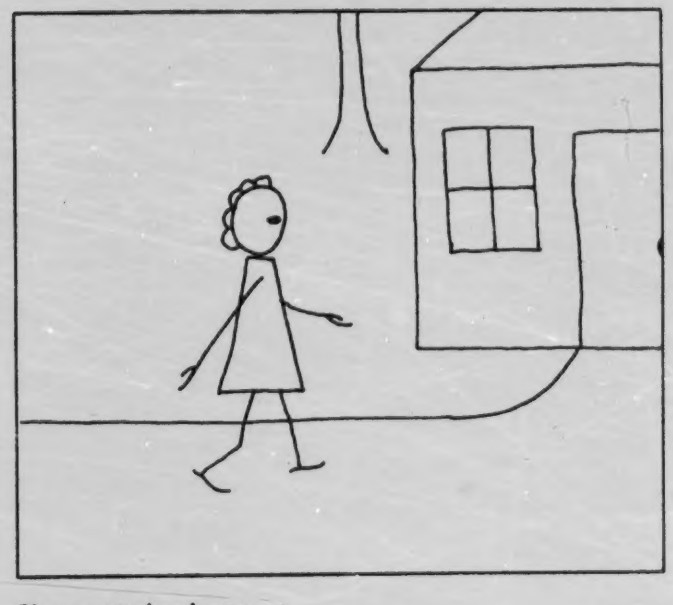


Which face is Don's?

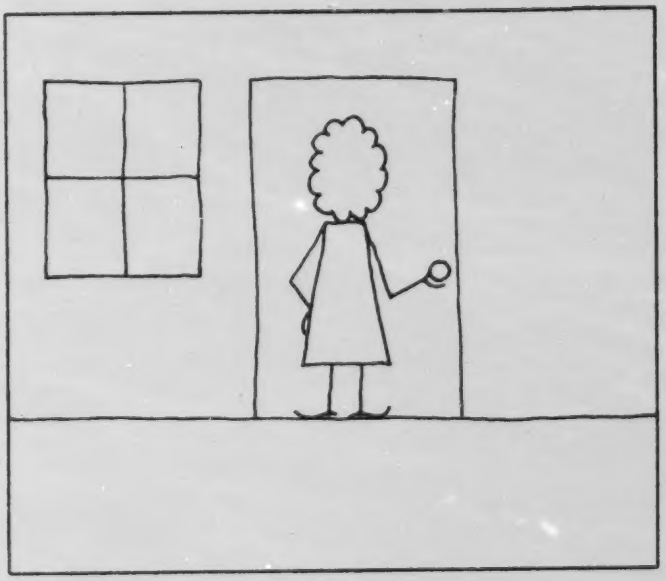
Item no. 10



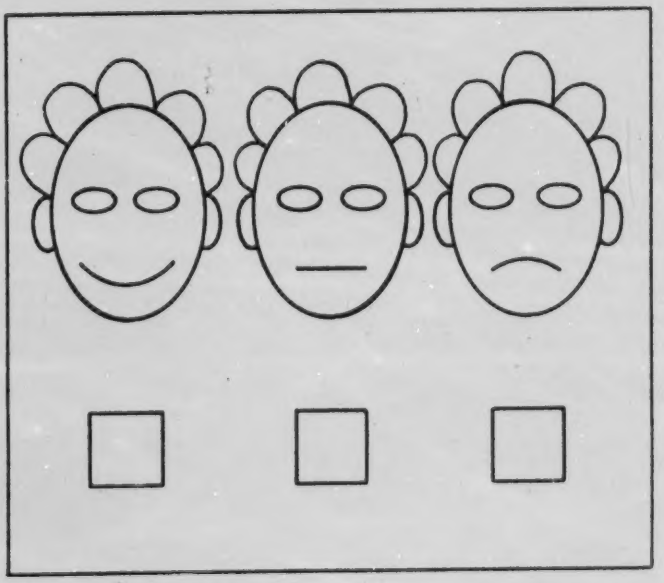
May is on her way home from school.



She gets to her house.

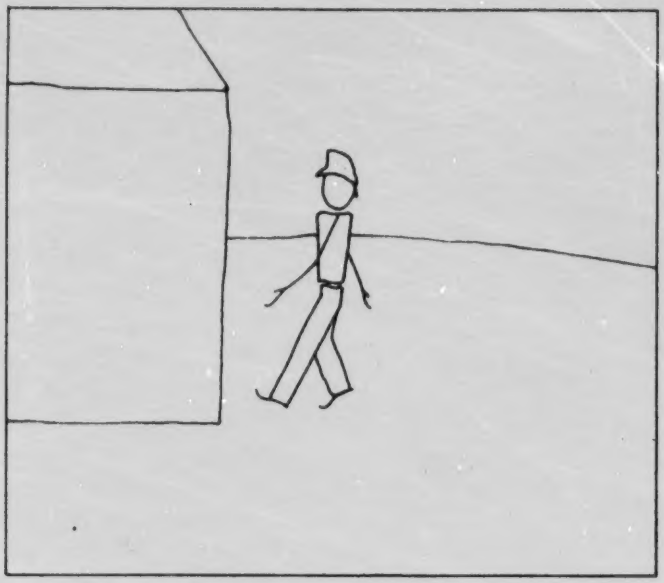


She stops for a minute in front of her door.



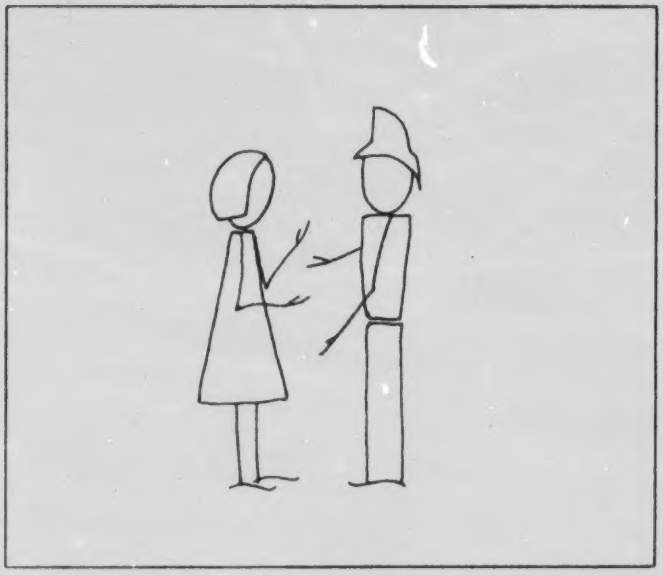
Which face is May's?

Item no. 11

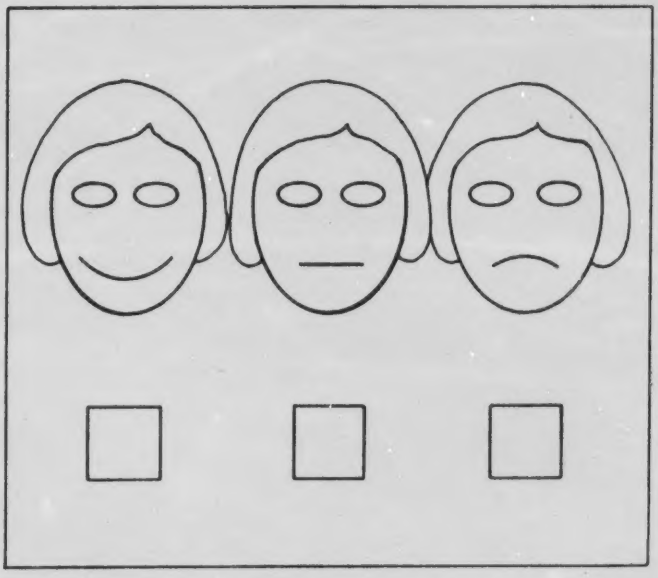


A fireman comes to Tony's house.

He says, "I want to look around in your house to see that it is safe."

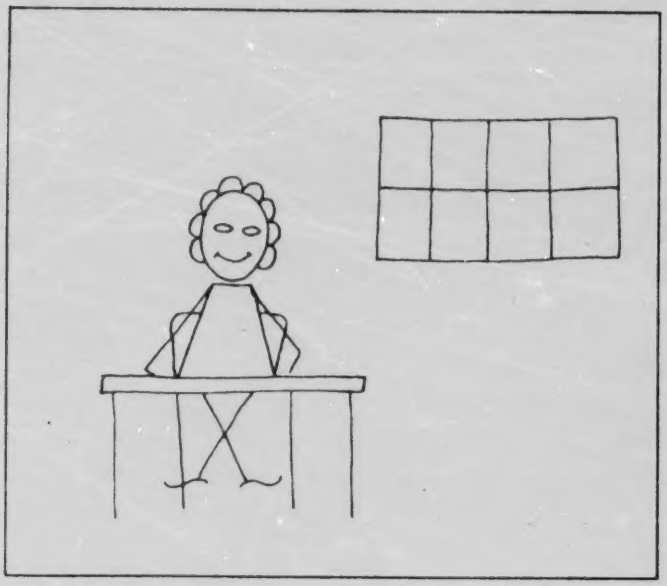


Tony's mother talks to the fireman.

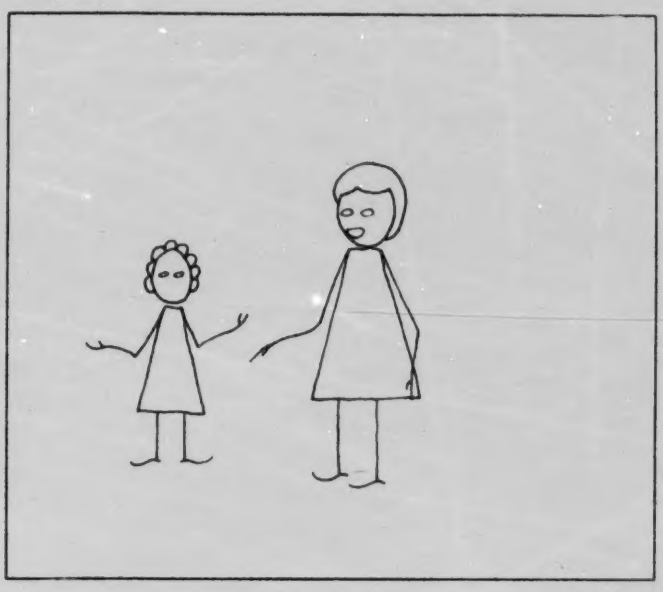


Which one is her face?

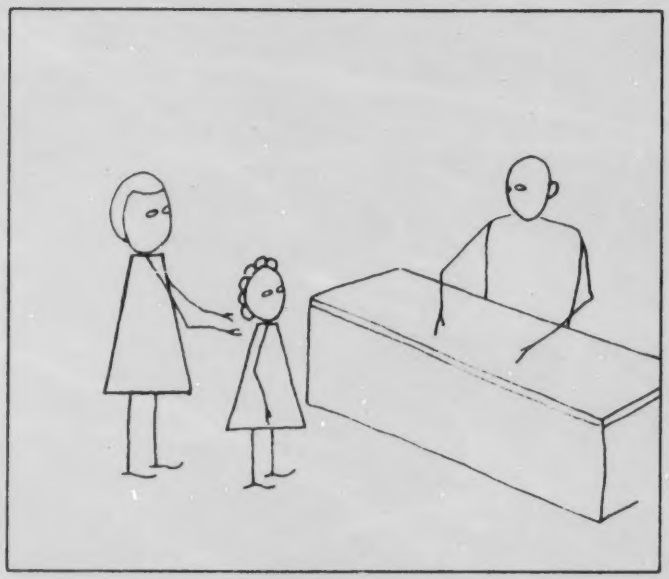
Item no. 12



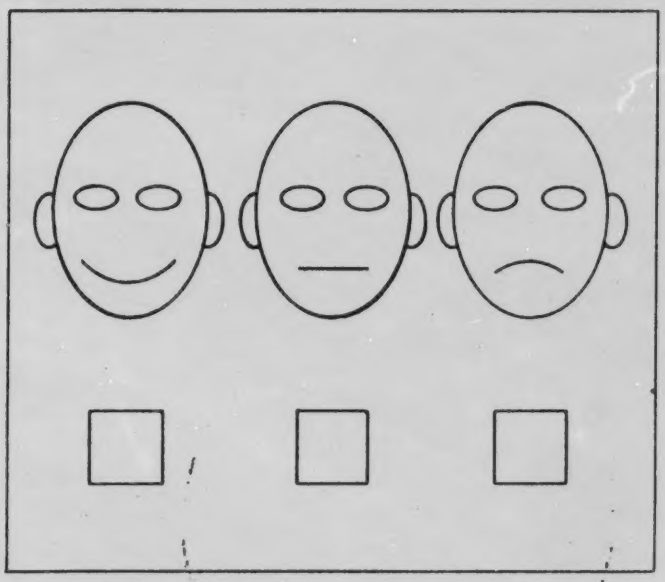
Ann is at school.



Her teacher says, "Come to the office with me, Ann, the principal wants to see you."

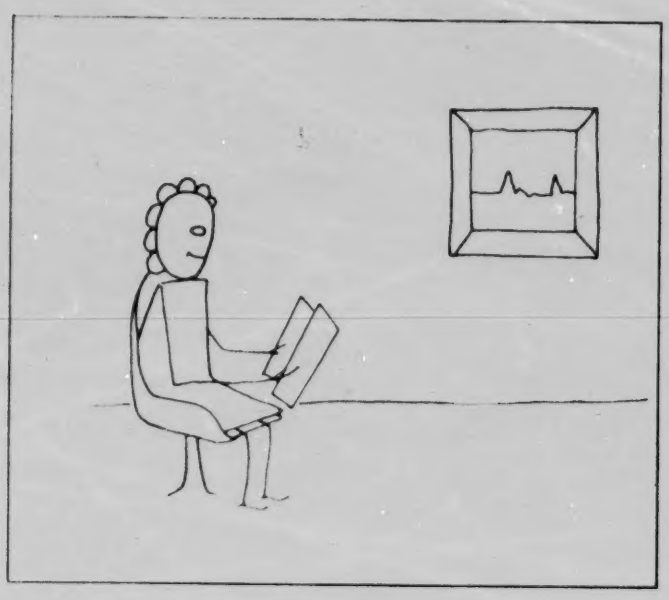


They get to the office. Ann sees the principal.

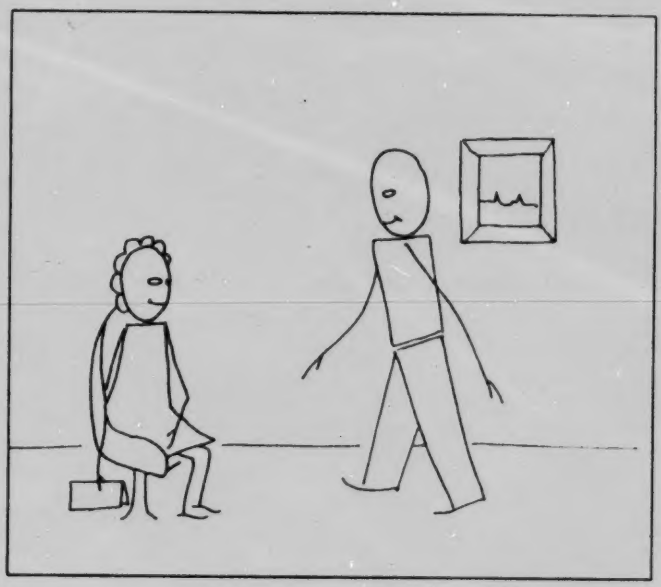


Which one is his face?

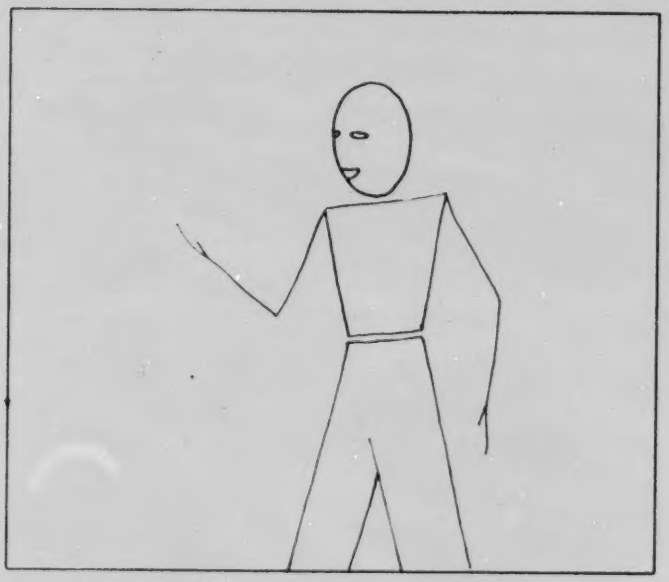
Item no. 13



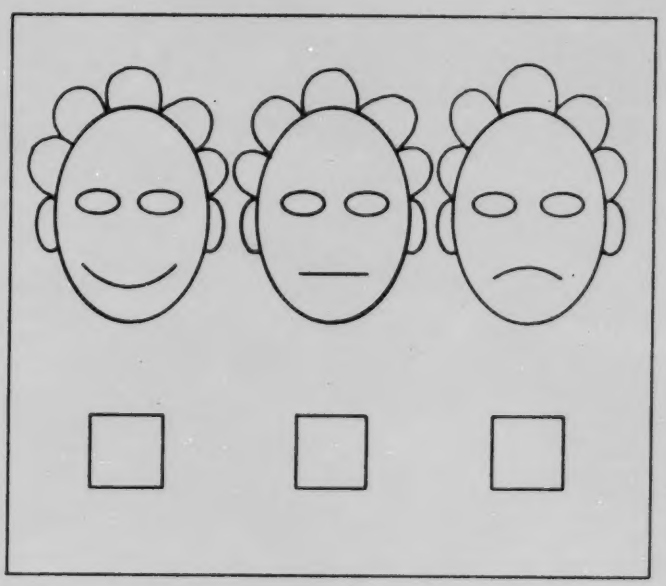
Jill is at home.



Her father comes in.

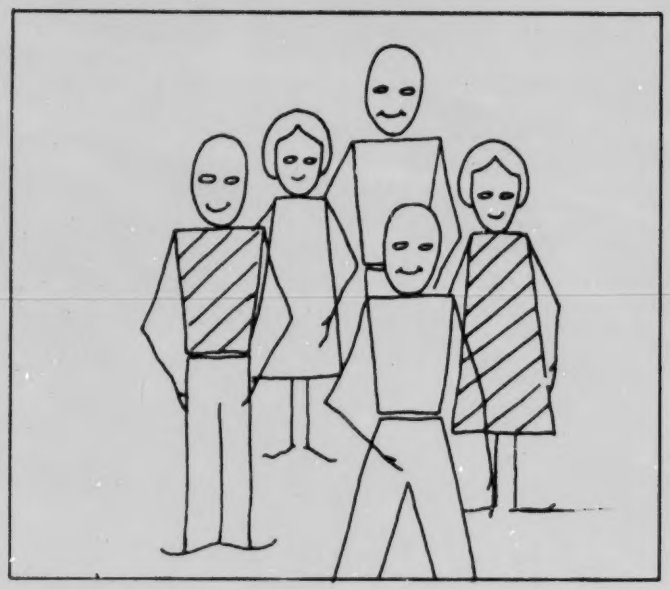


Her father says, "Come here, Jill. I want to talk to you about something."

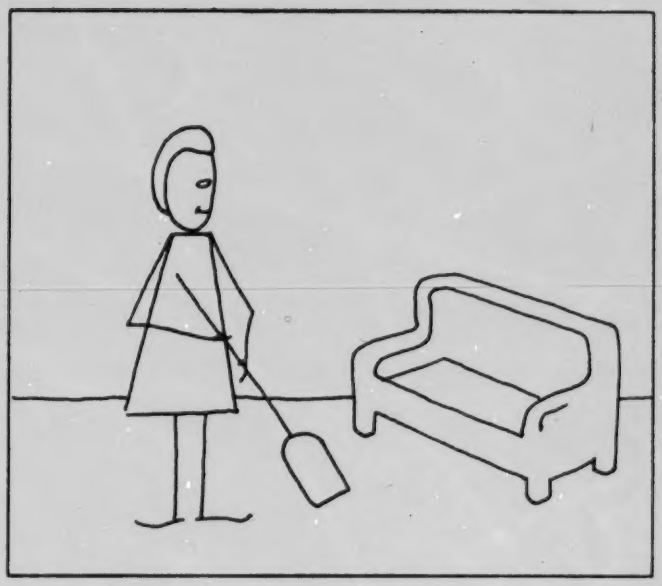


Which face is Jill's?

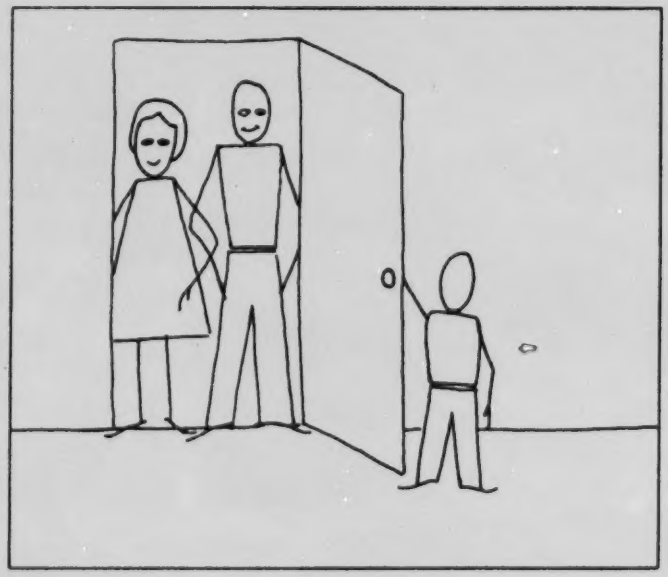
Item no. 14



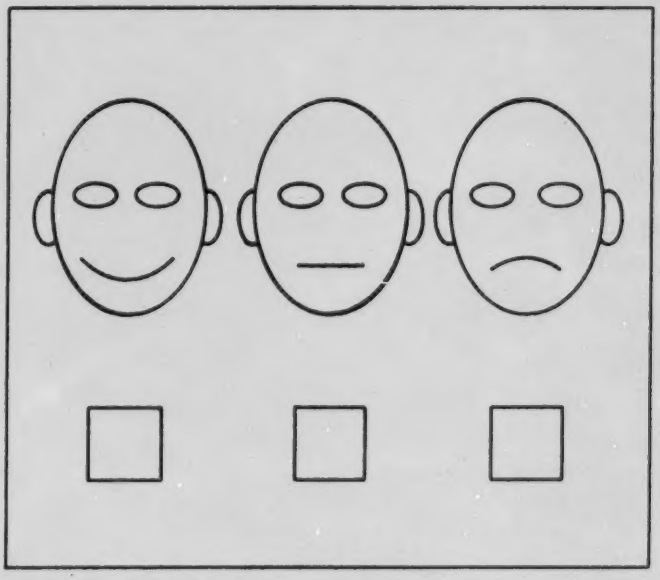
All the neighbors are going to have a meeting at Mike's house.



Mike's mother is getting ready.

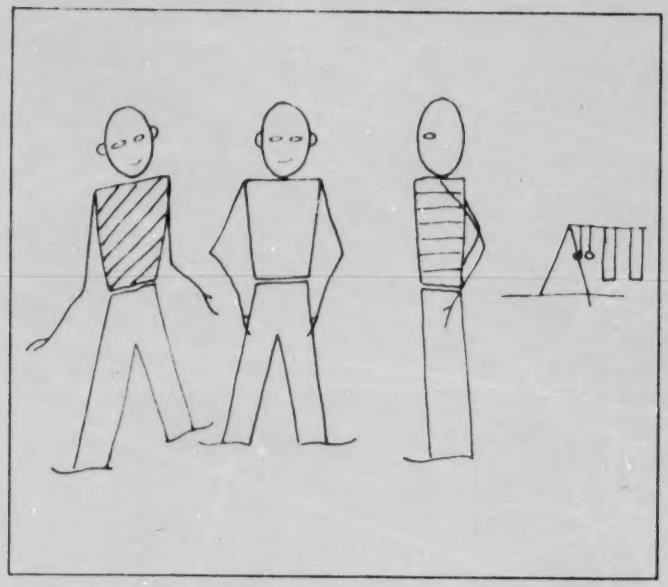


Mike answers the door. Some neighbors come in.

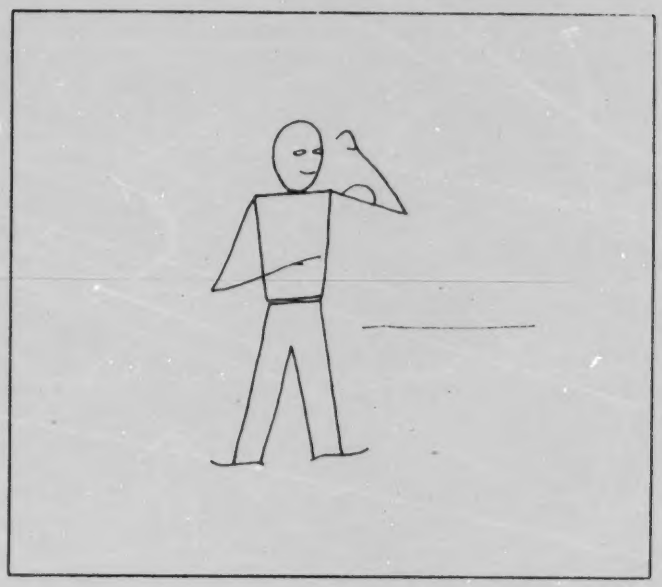


Which one is Mike's face?

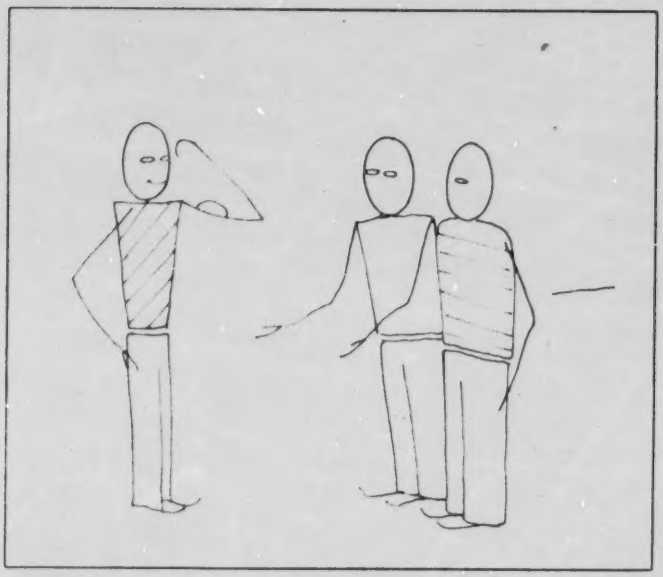
Item no. 15



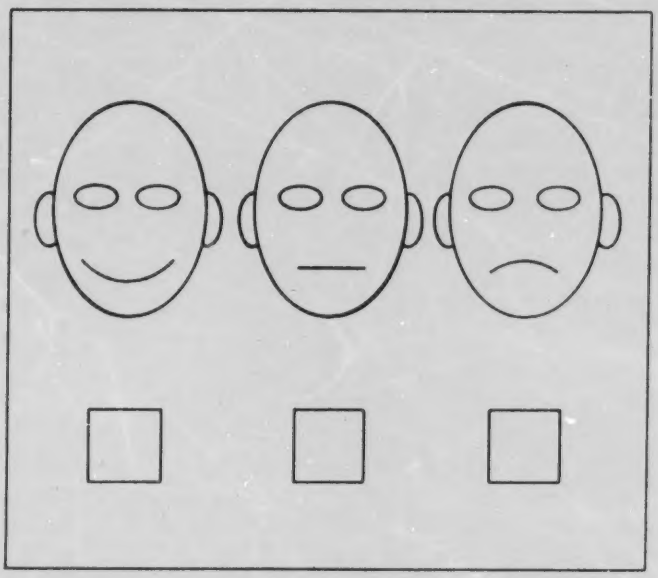
The boys are on the play-ground.



Each one is showing how strong he is.

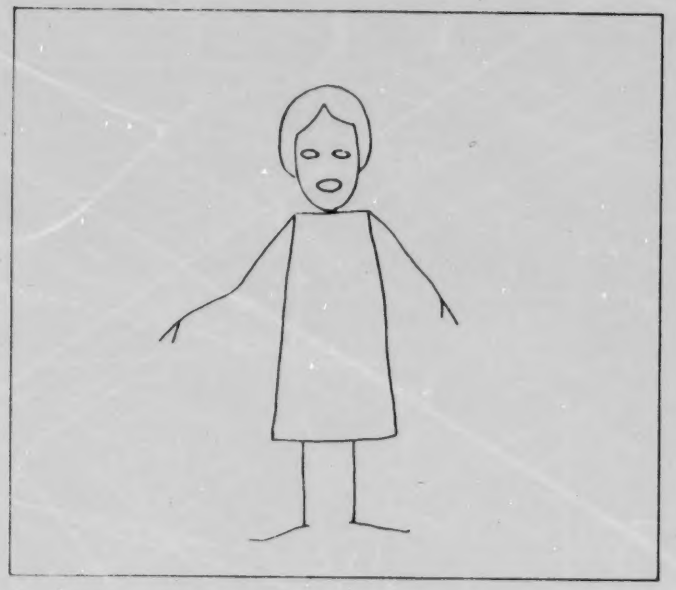


It is Carl's turn. The boys are watching him.

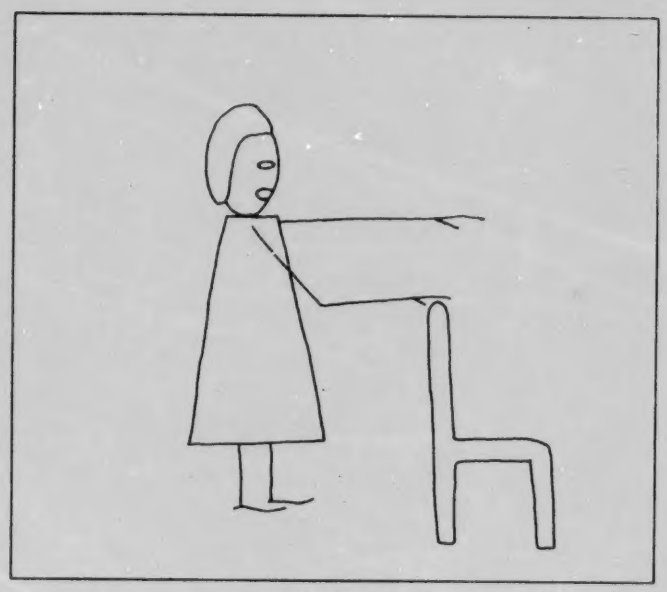


How do the boys look?

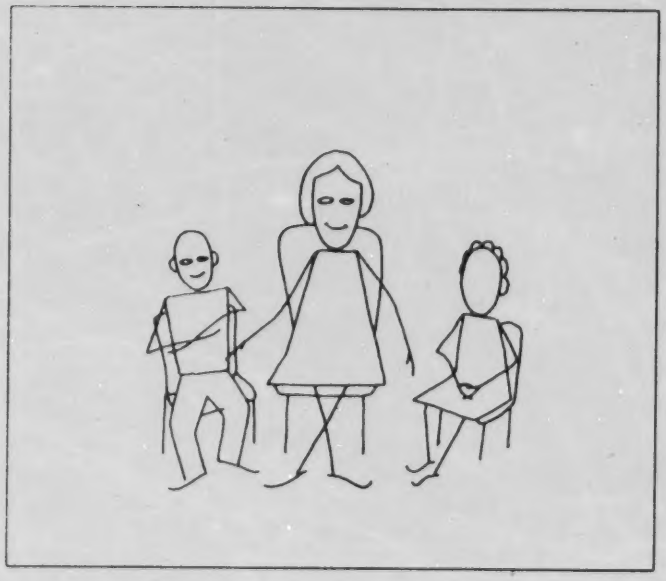
Item no. 16



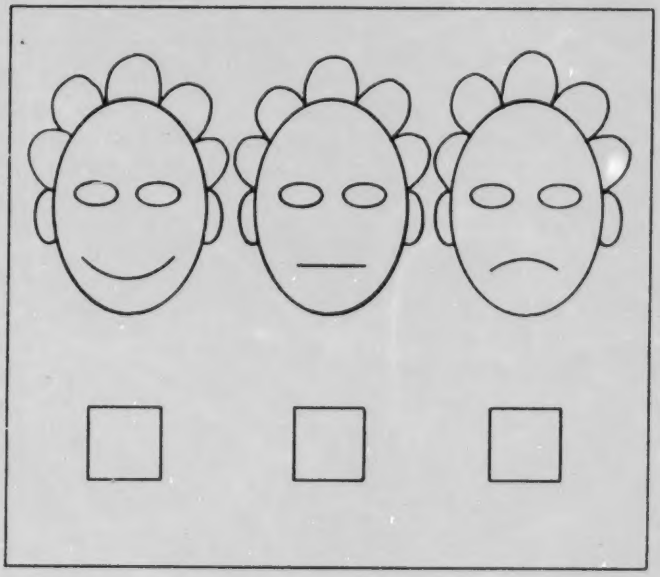
The teacher says, "Class, let's put our chairs together in a circle."



She says "Kathy, come put your chair here next to mine today."

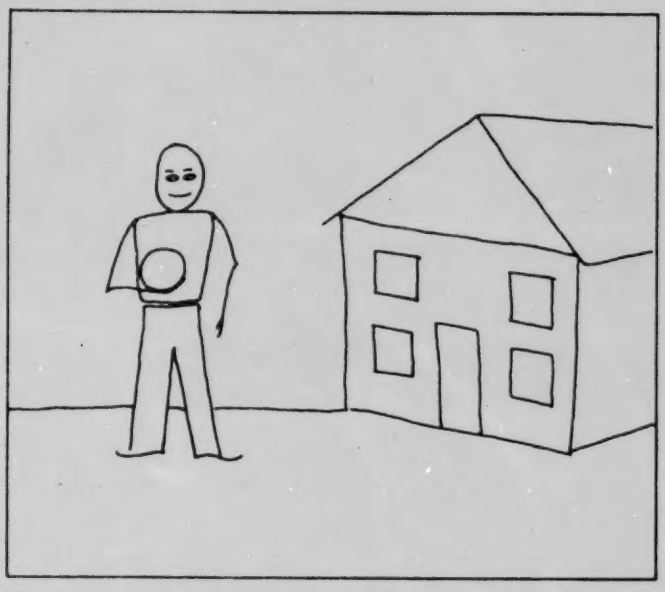


The class sits down. Kathy is next to her teacher.

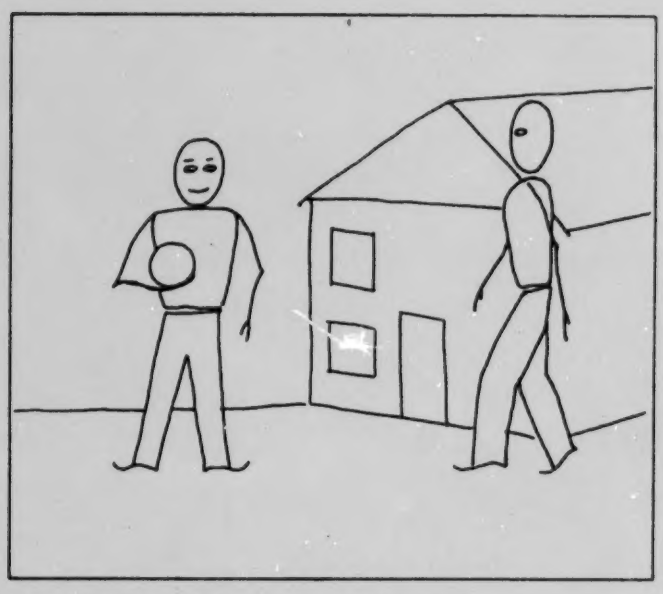


Which one is Kathy's face?

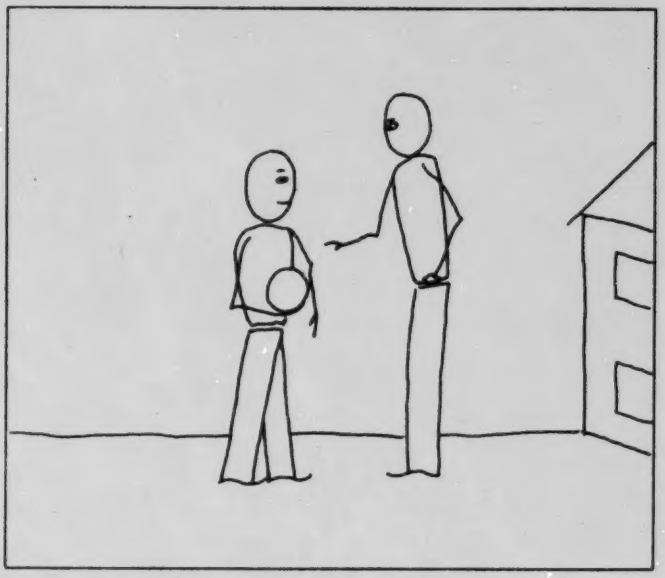
Item no. 17



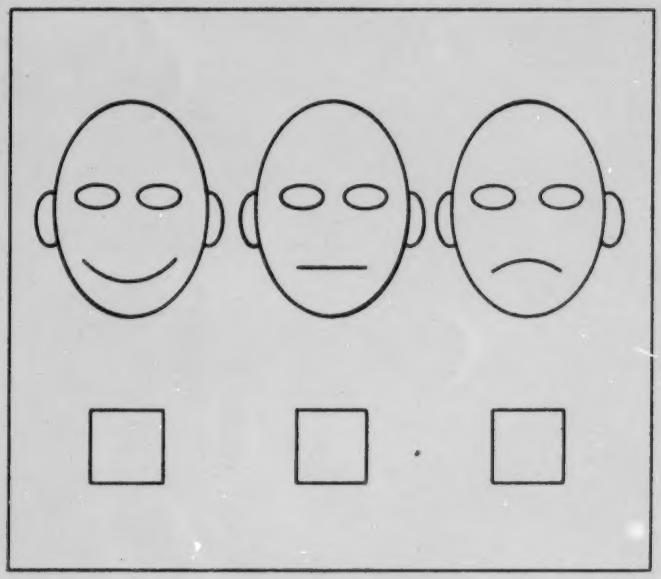
Steve is outside his house playing ball.



Steve sees the neighbor man coming up to his house

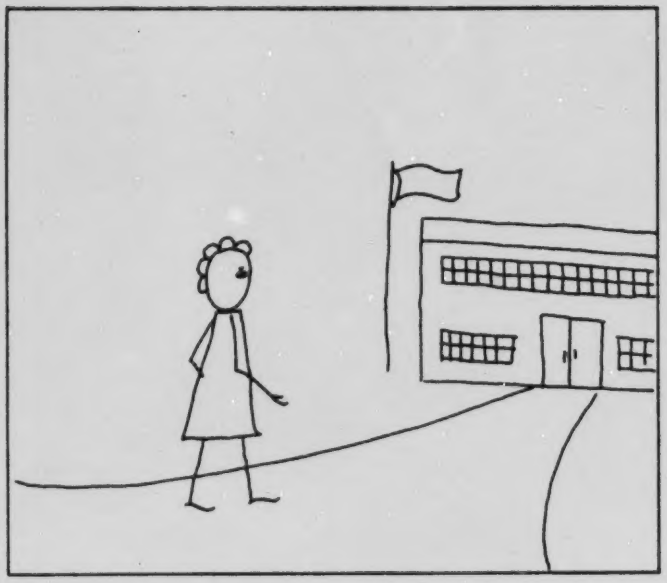


The neighbor man stops to talk to Steve.

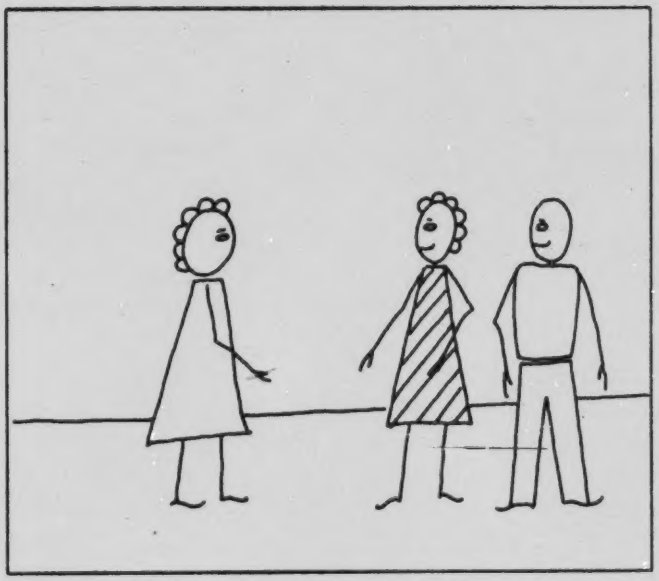


Which face is the neighbor man's?

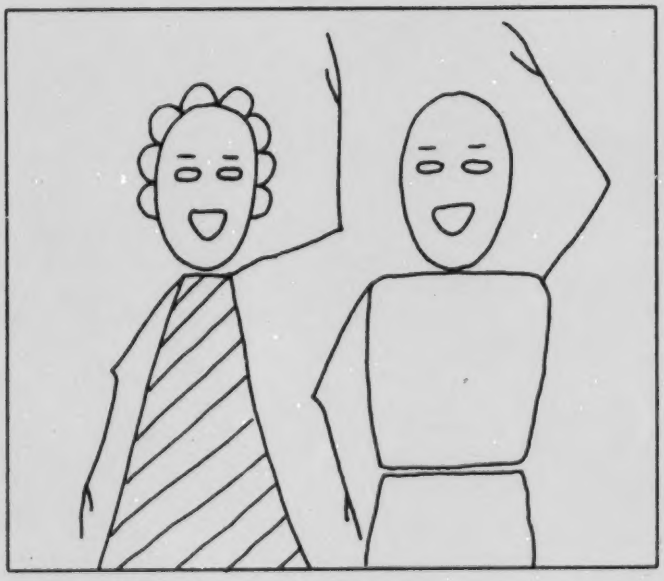
Item no. 18



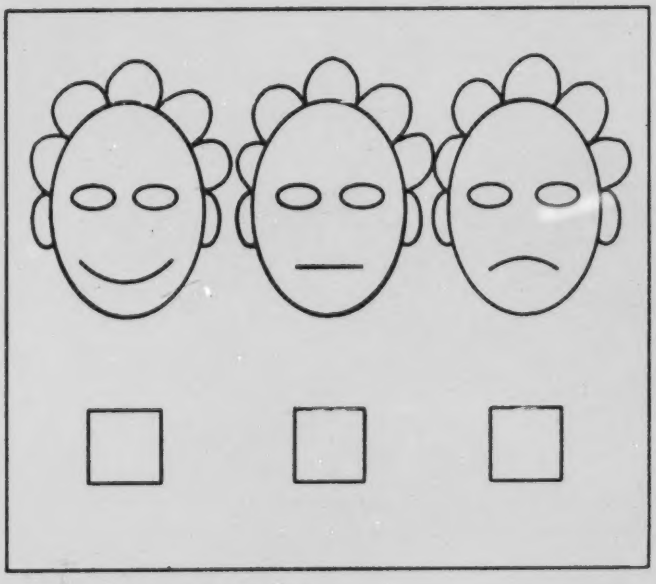
Janet is coming up the walk toward school.



She sees some children in her class.

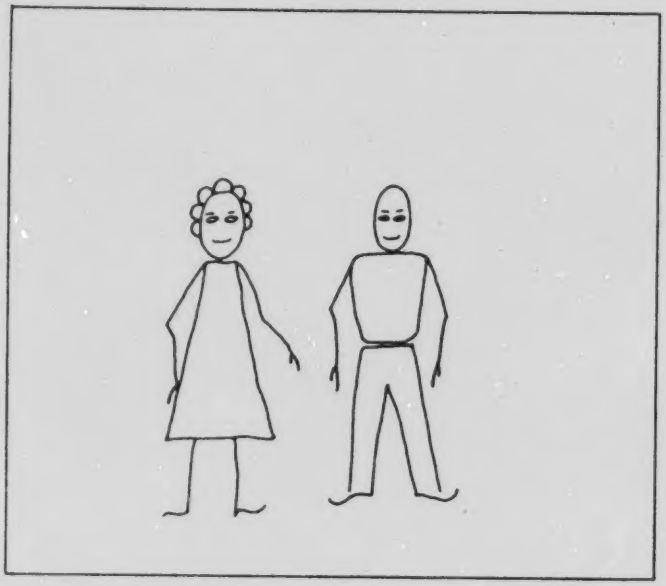


Some of the kids say, "Hi, Janet."

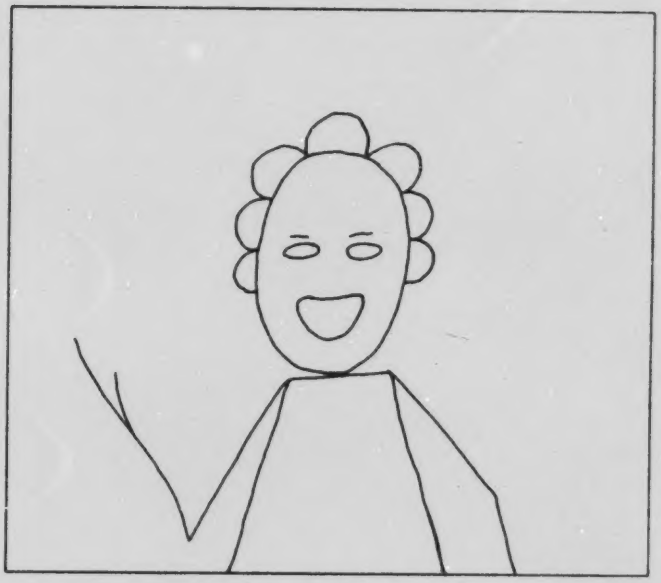


Which one is Janet's face?

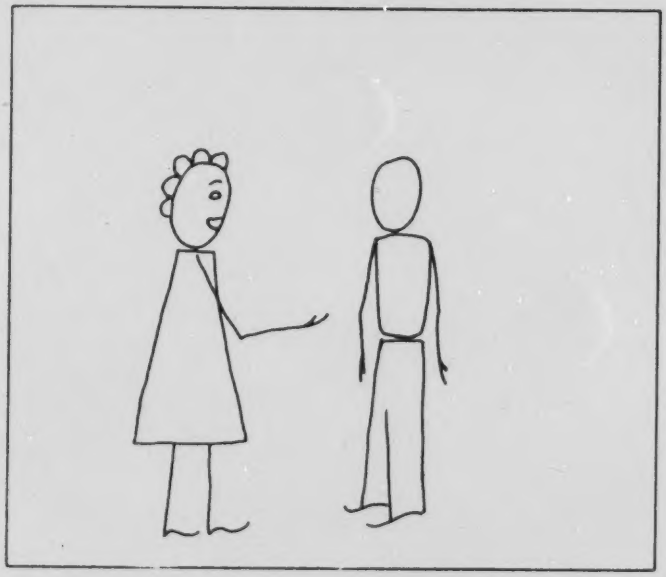
Item no. 19



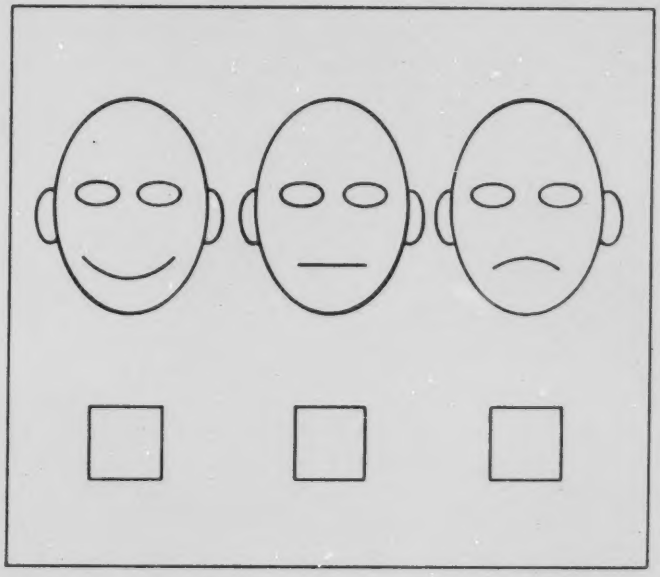
Jean is visiting Dave.



She says, "I go to a nice school."

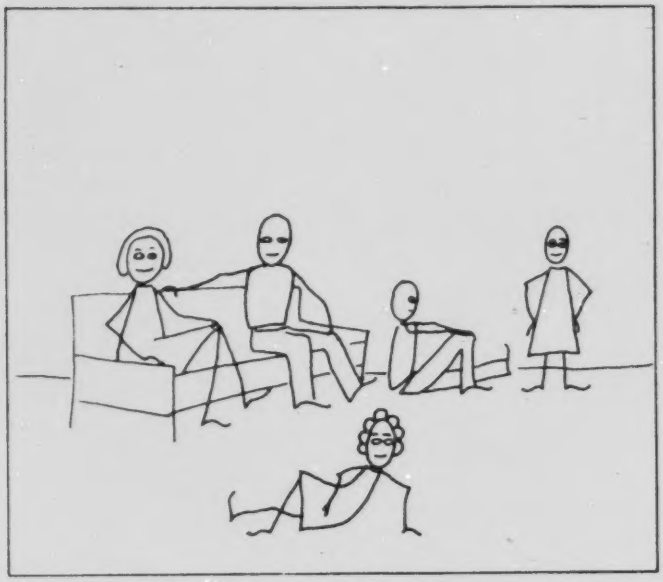


She says, "How do you like your school, Dave?"

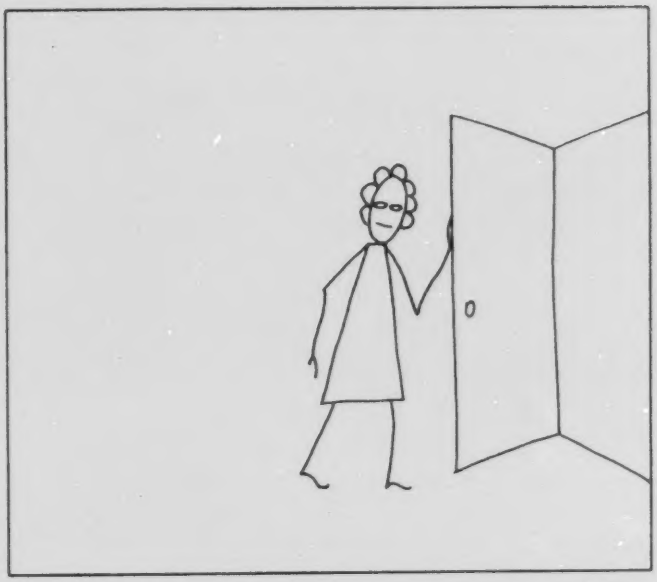


Which one is Dave's face?

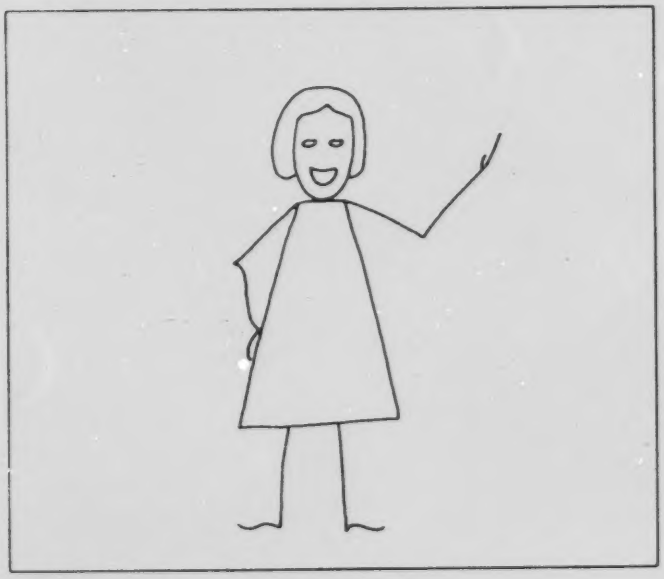
Item no. 20



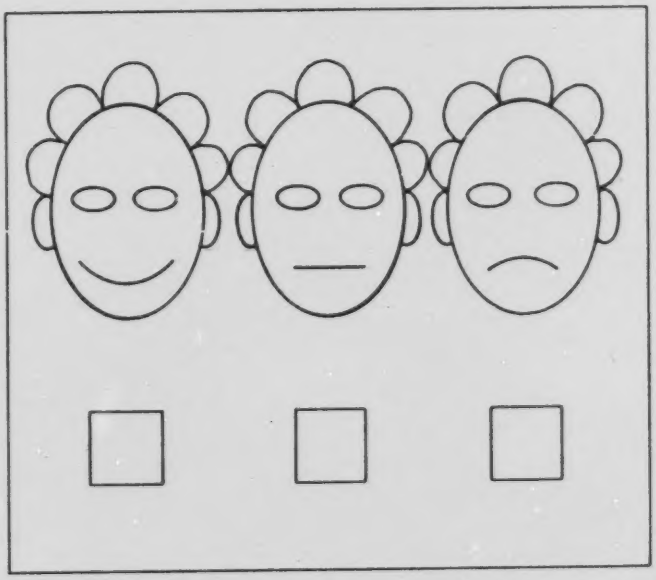
Molly is at home with her mother and father, her brother and her sister.



She starts to leave the room.

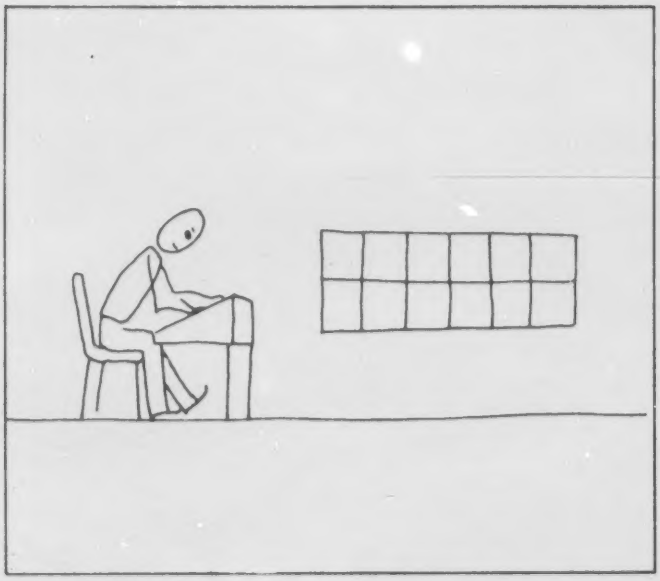


Mother says, " Stay here Molly - our whole family is together."

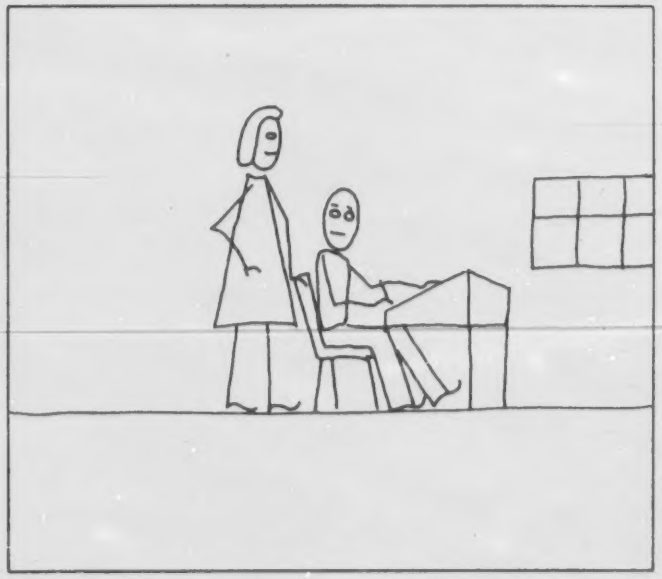


Which one is Molly's face?

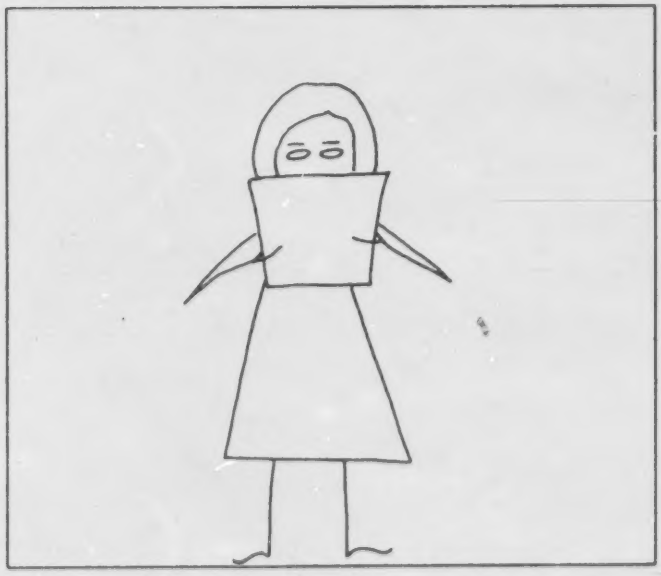
Item no. 21



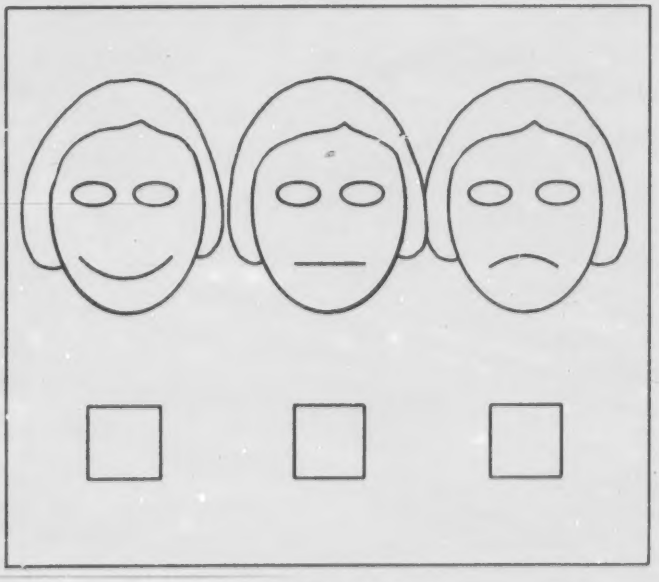
Mark is working at school.



Mark's teacher comes over.



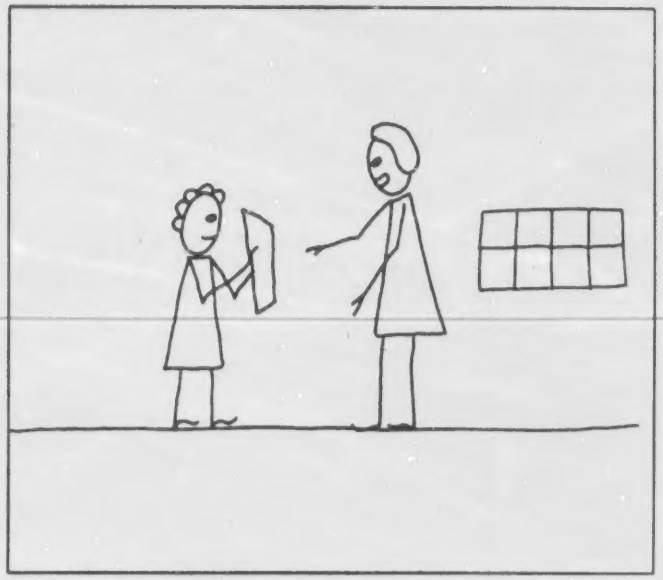
She looks at Mark's work.



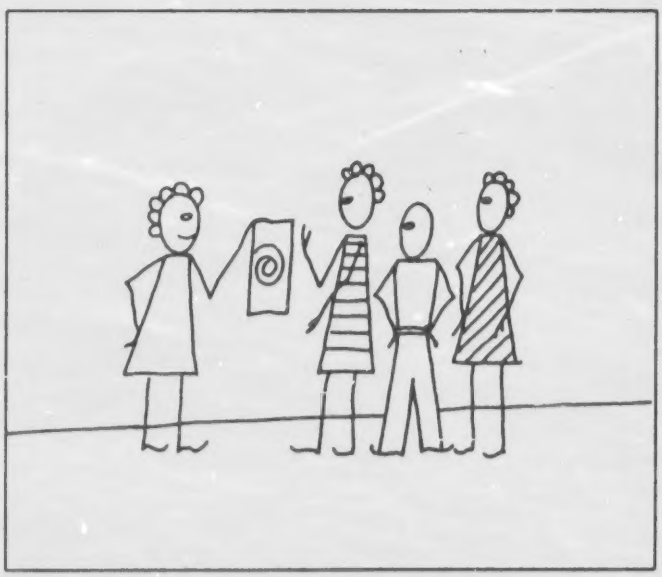
Which one is the teacher's face?

Item no. 22

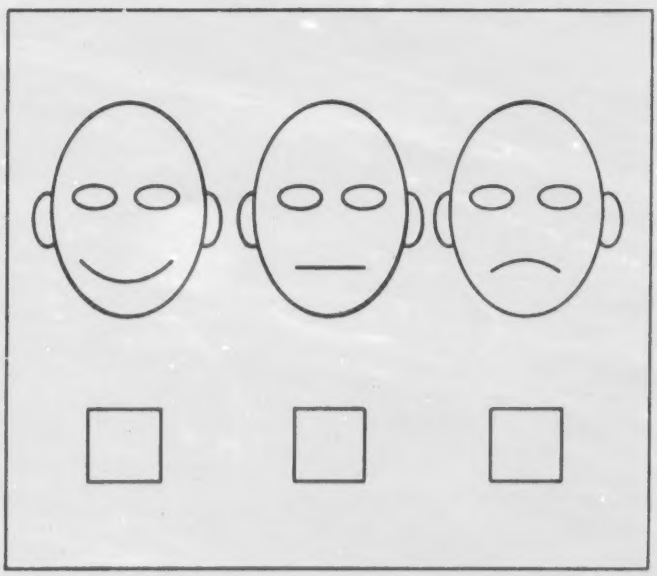
Alice has made a picture at school.



The teacher tells Alice it is a good picture.

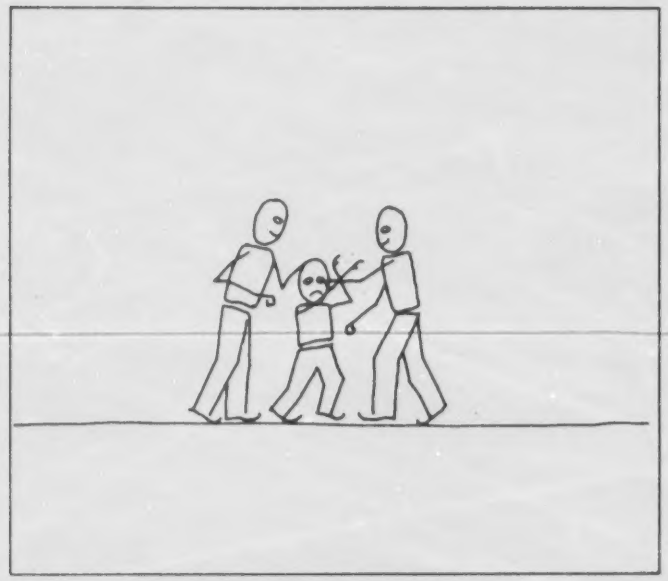


Alice shows it to the other children after school.

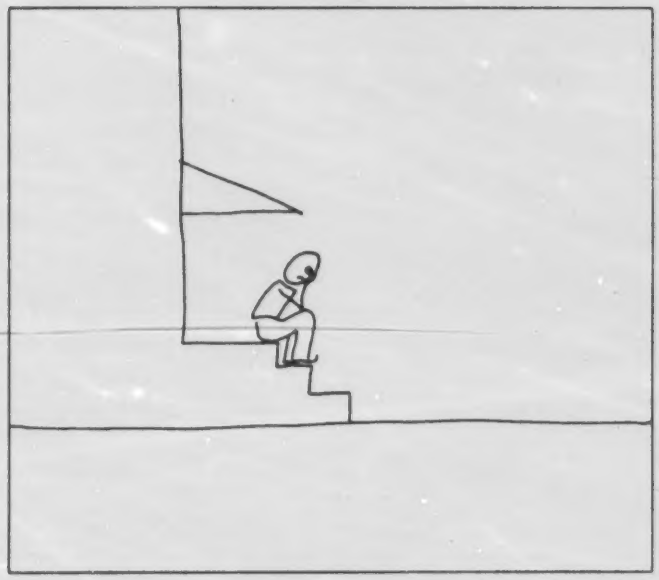


How do their faces look?

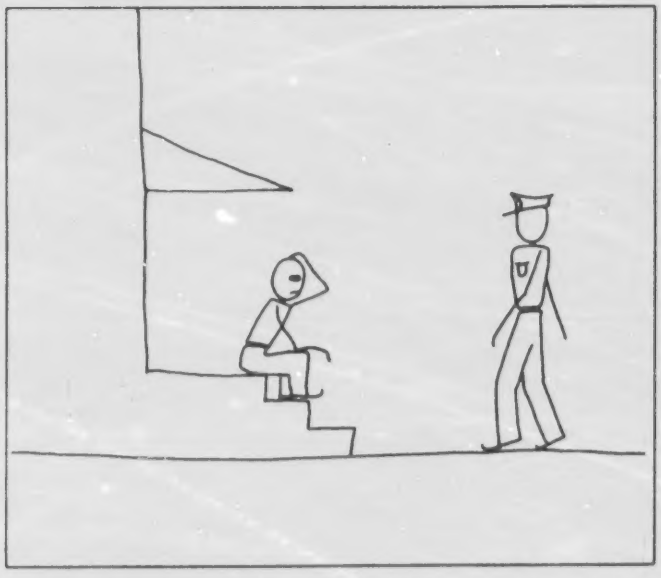
Item no. 23



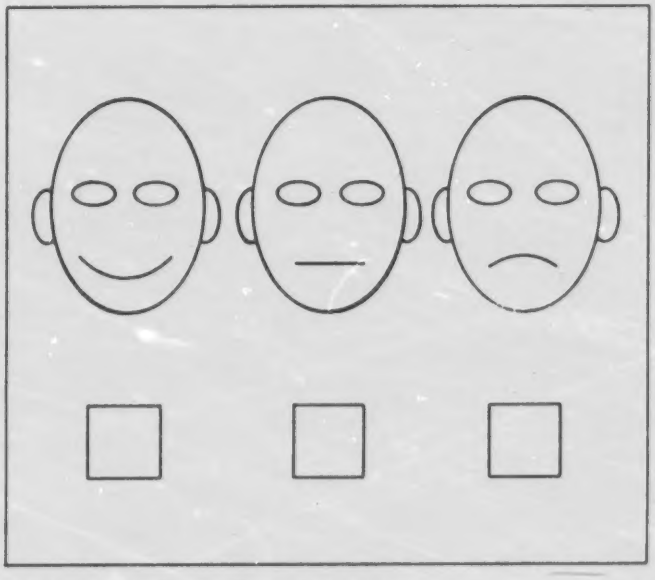
Max was hit by some older boys on the way home from school.



He is crying in a doorway.

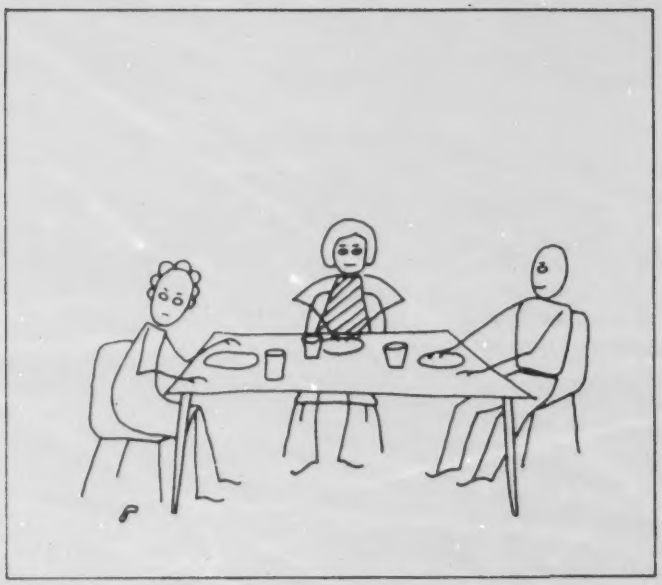


He sees a policeman walking up to him.

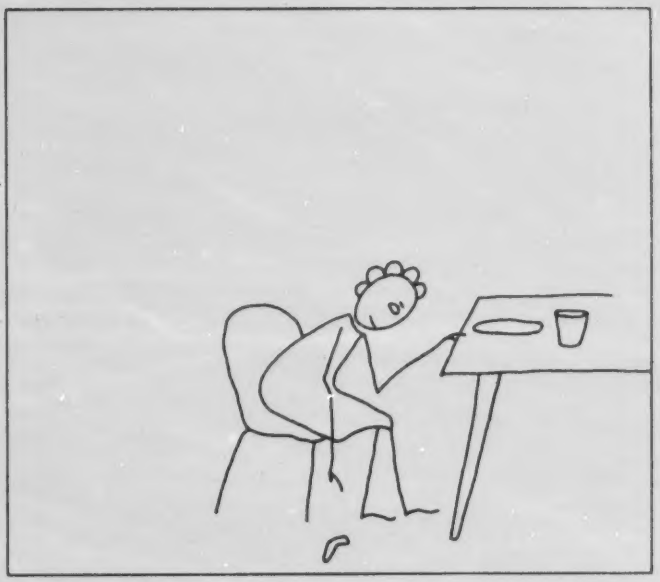


Which one is the policeman's face?

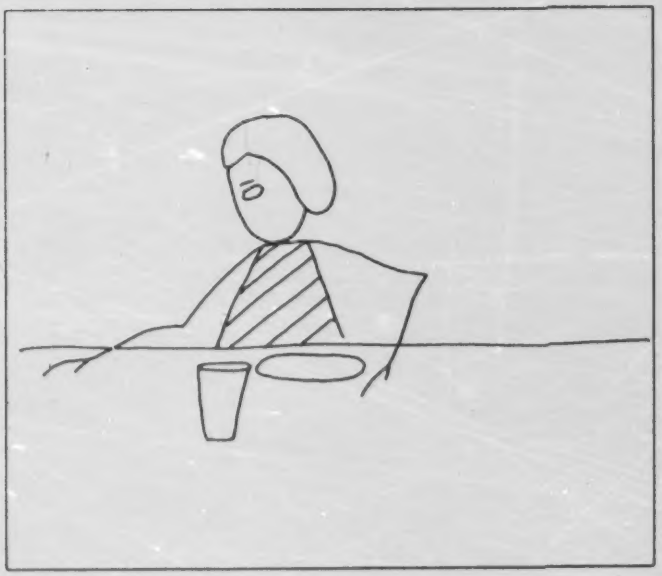
Item no. 24



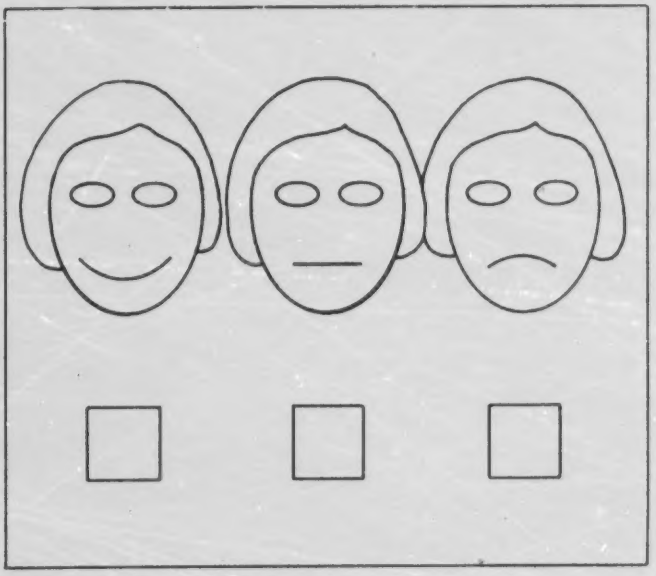
Betty drops some of her food at the table.



She starts to pick it up.

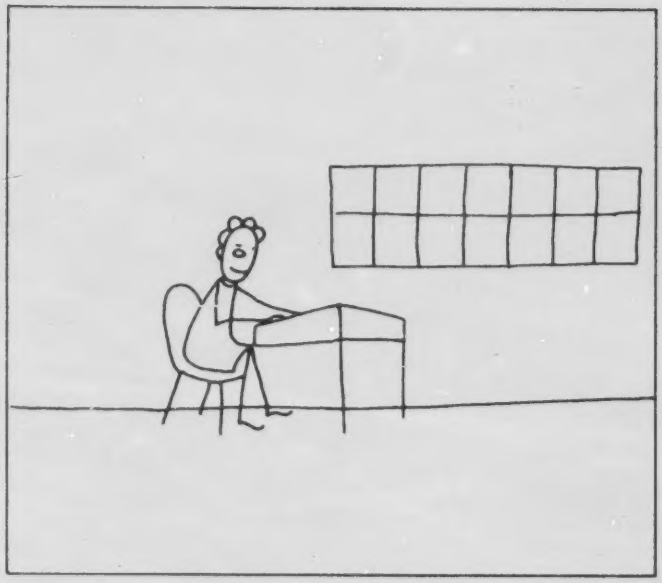


She sees her mother looking at her.

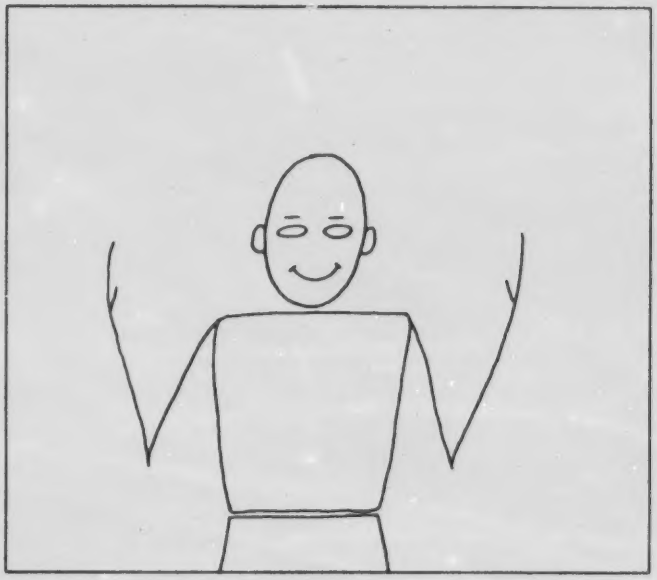


Which one is her mother's face?

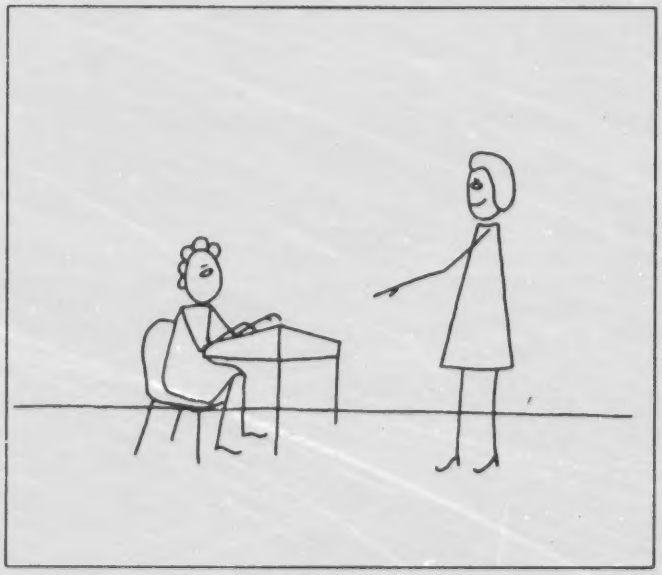
Item no. 25



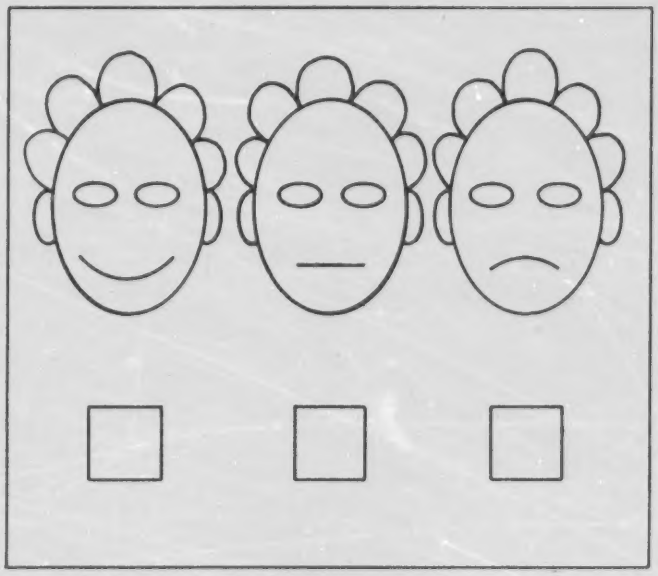
Julie is in school.



Each child is telling about his favorite food.

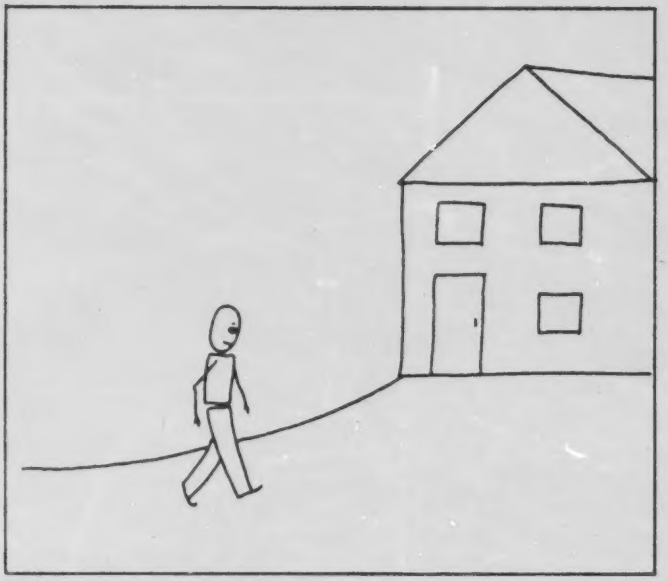


The teacher calls on Julie.

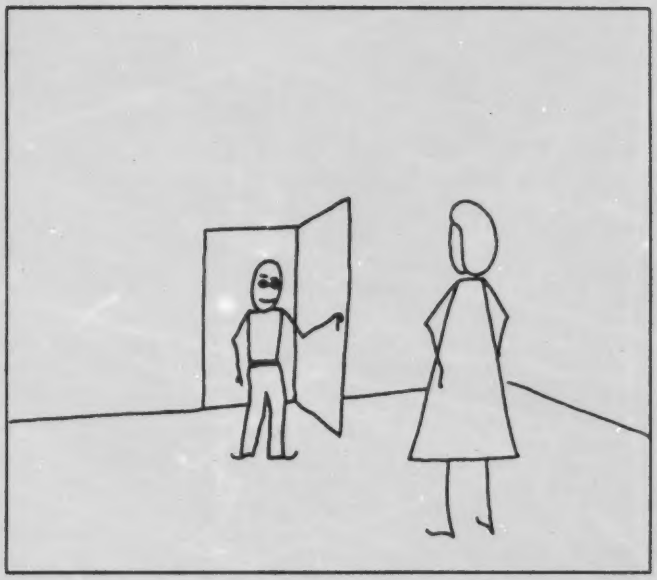


Which one is Julie's face?

Item no. 26

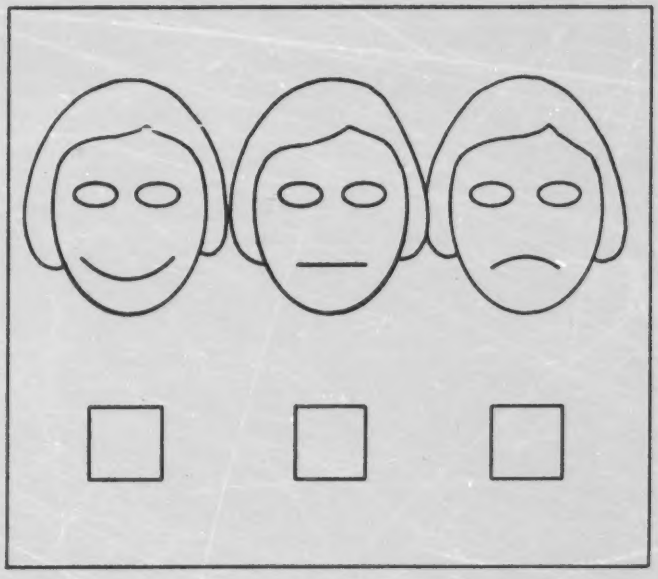


Phil comes home early from school.



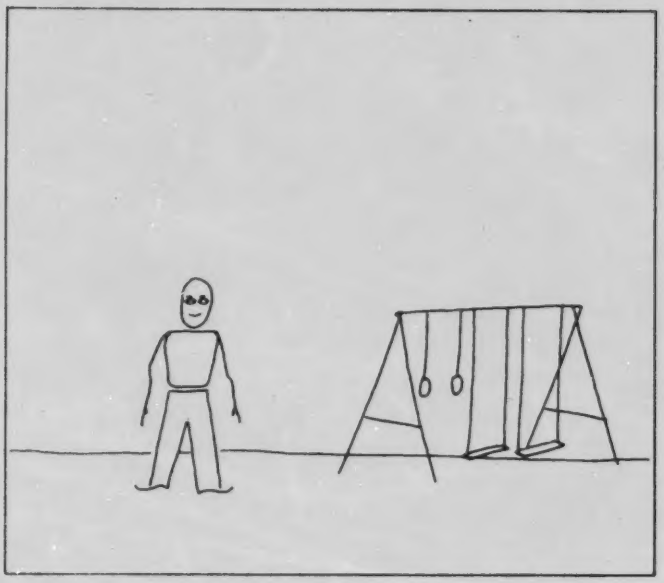
His mother sees him come in . . .

She says, "Why are you home so soon?"

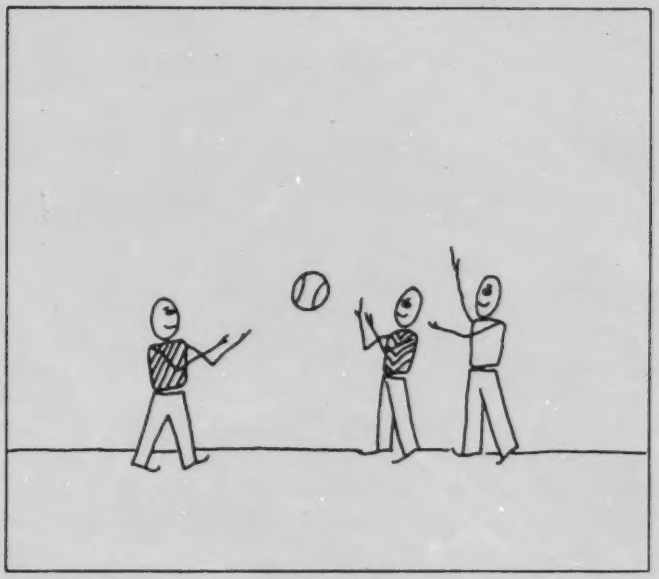


Which one is his mother's face?

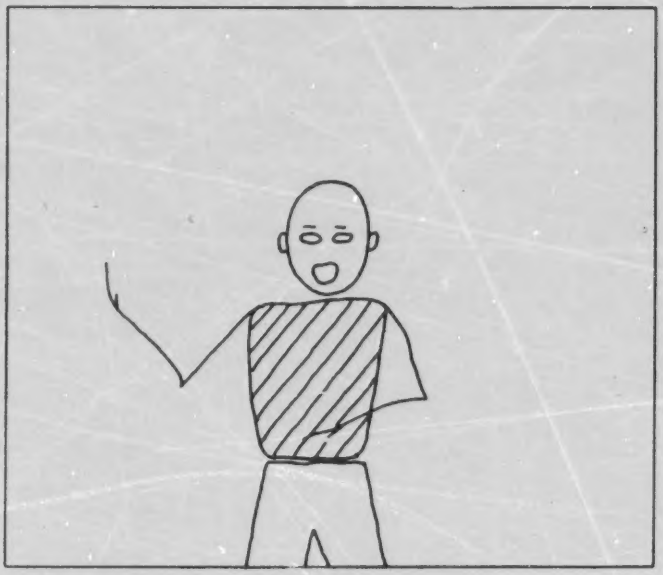
Item no. 27



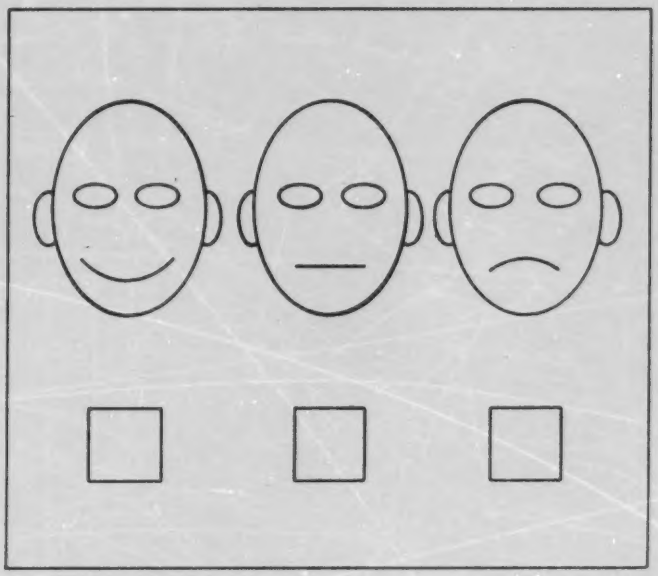
John is out on the playground.



He sees a group of children playing a game.

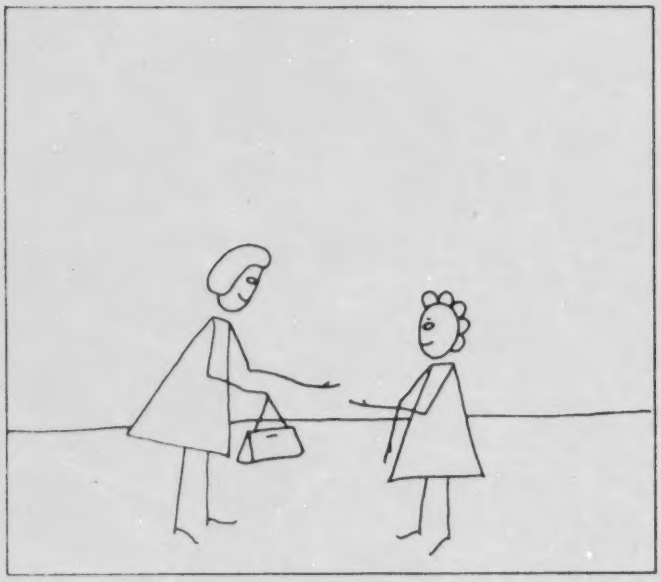


One of the boys says, "Come and play with us, John."



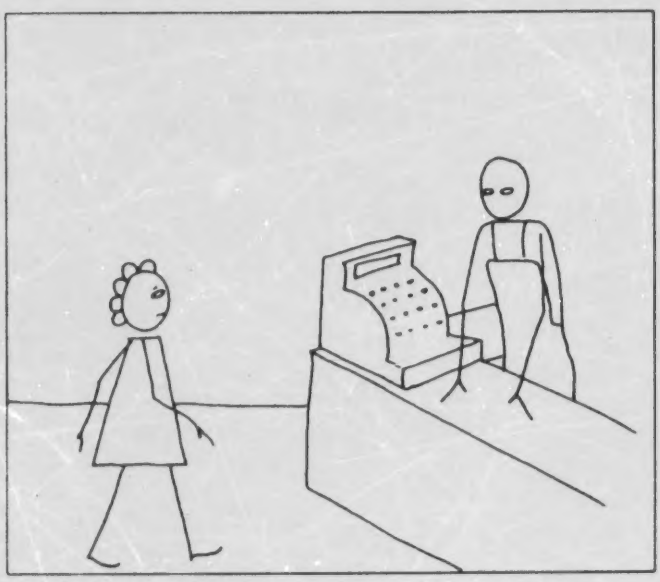
Which one is John's face?

Item no. 28

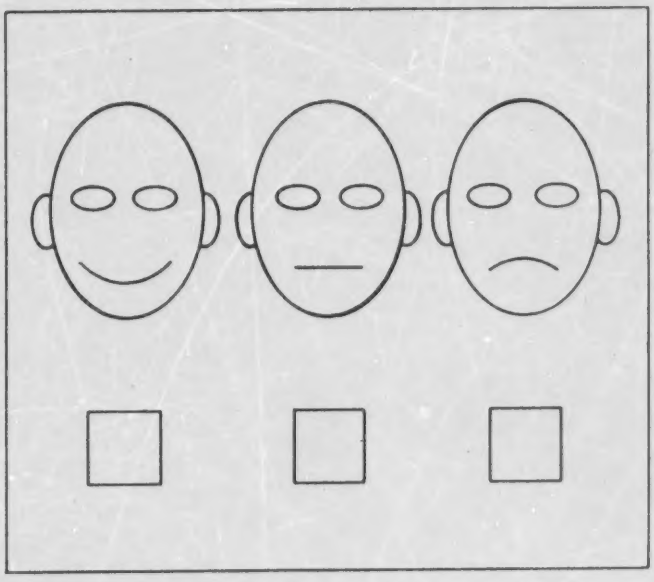


Sue's mother asks her to go to the store.

Sue gets to the store.

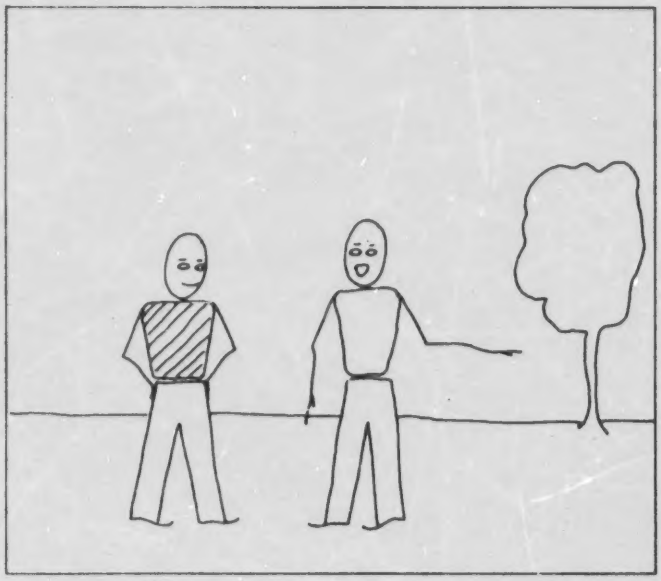


The store-man sees Sue.

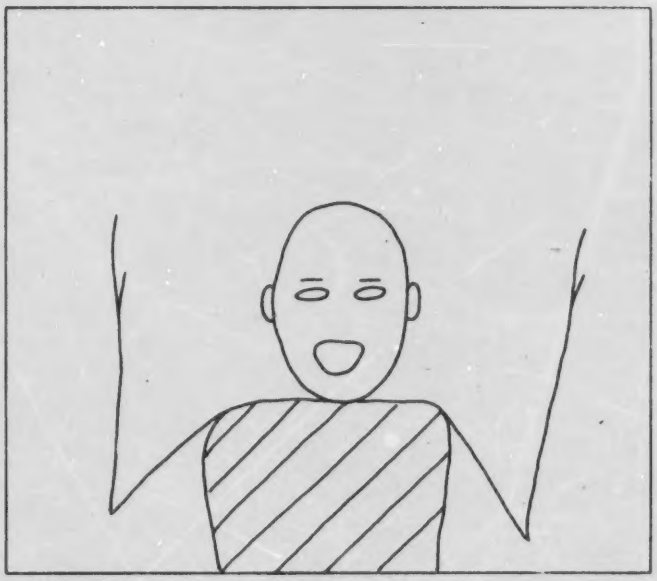


Which face is the store-man's?

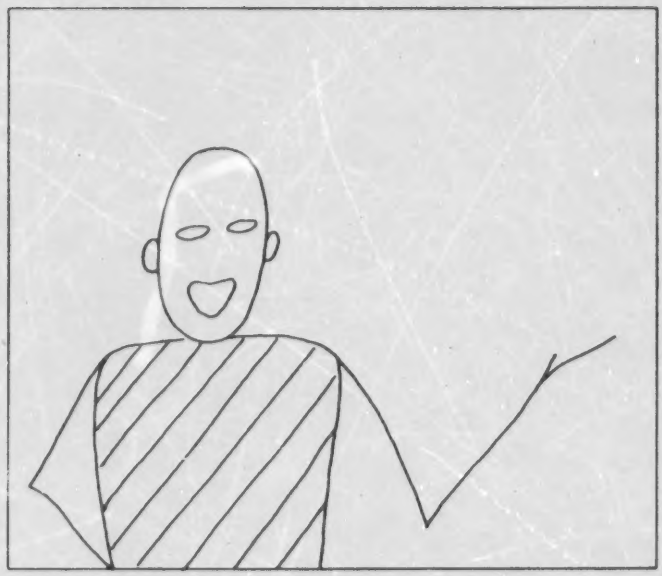
Item no. 29



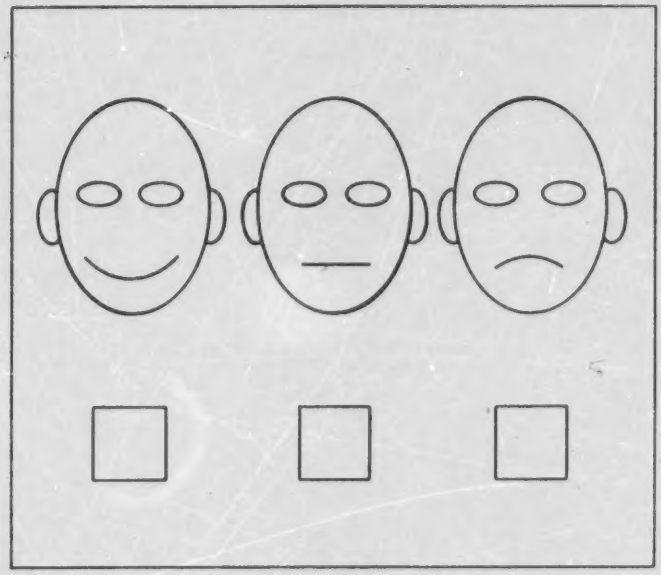
Tom and Bill want to go inside to play.
Tom says, "Let's go to your house, Bill."



Bill says, "No. My folks are always mean!"

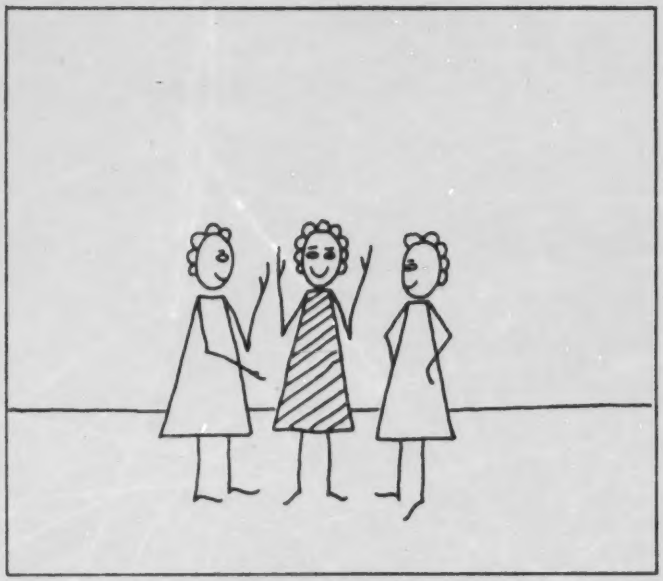


Bill says "What about your house, Tom?"



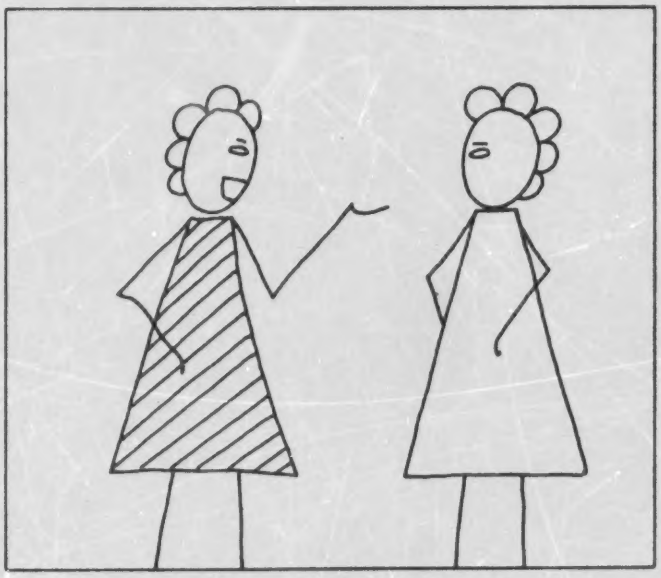
Which one is Tom's face?

Item no. 30

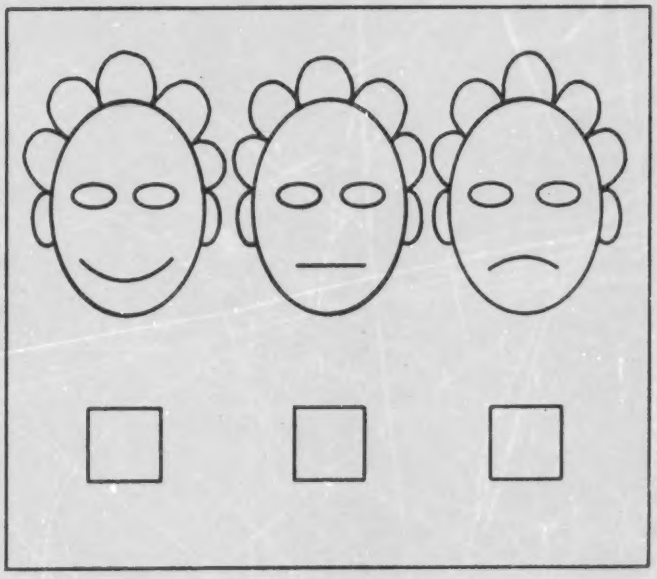


Peggy is with some other girls. They want to have a club.

One of the other girls says, "We need more kids in our club."

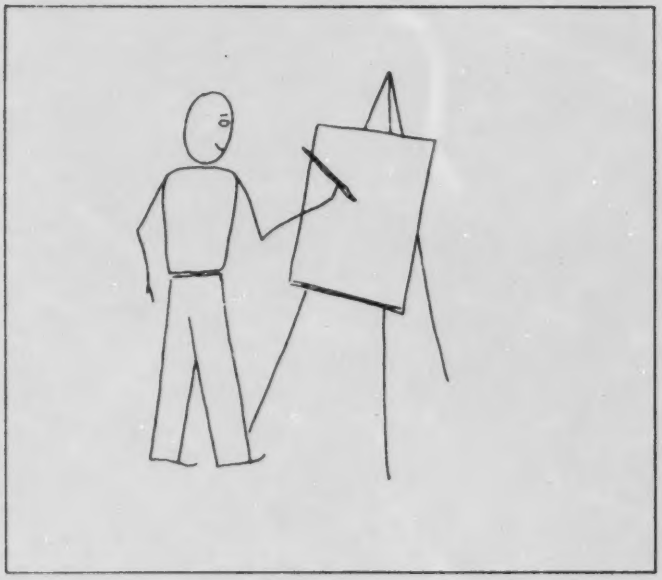


She says, "What do you think, Peggy?"

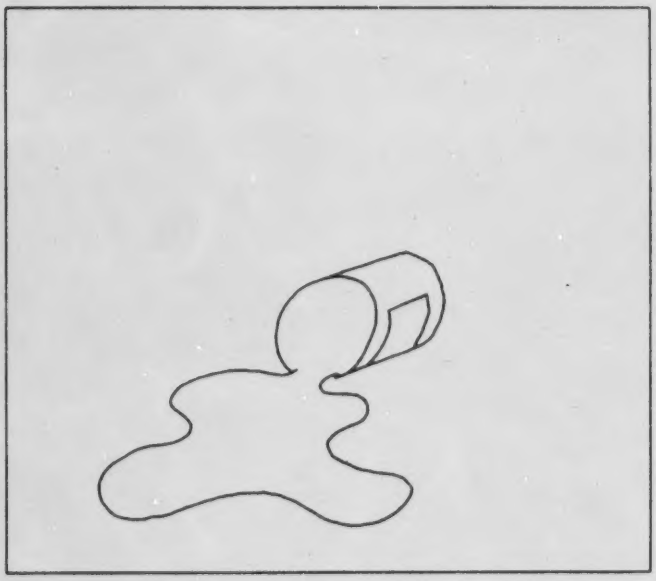


Which one is Peggy's face?

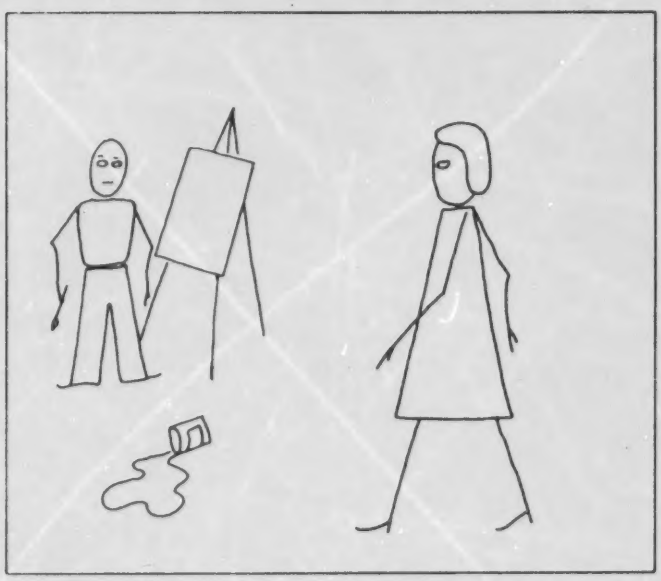
Item no. 31



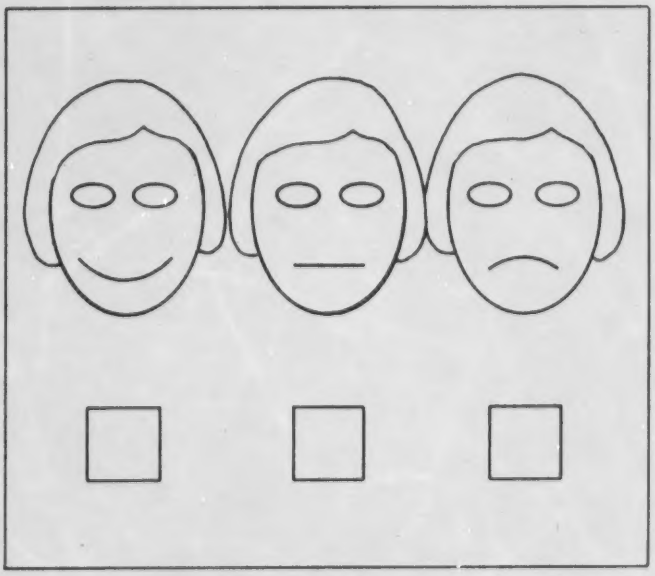
Ray is painting at school.



He spills some paint on the floor. He doesn't know what to do about it.

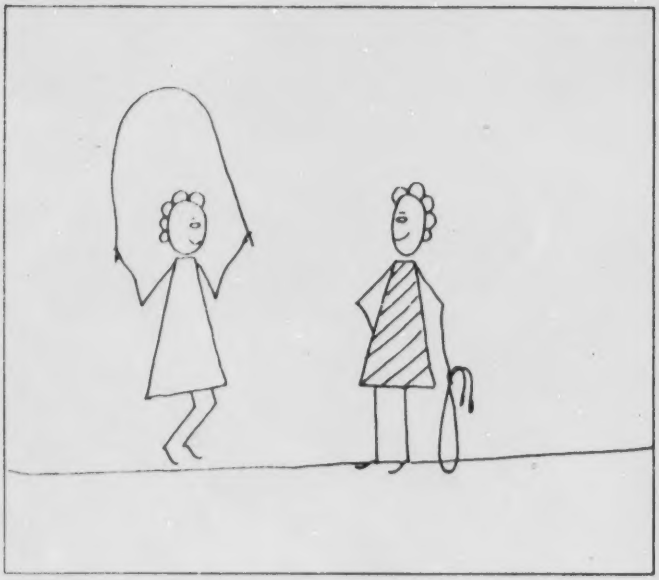


He sees the teacher coming over . . .

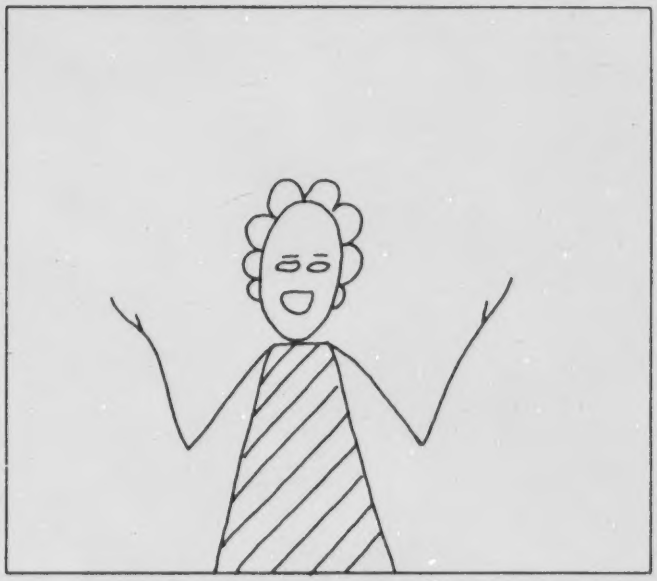


Which one is the teacher's face?

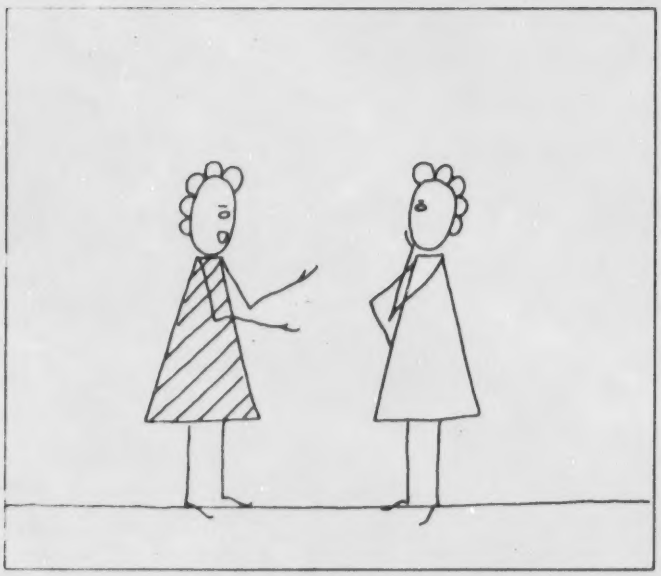
Item no. 32



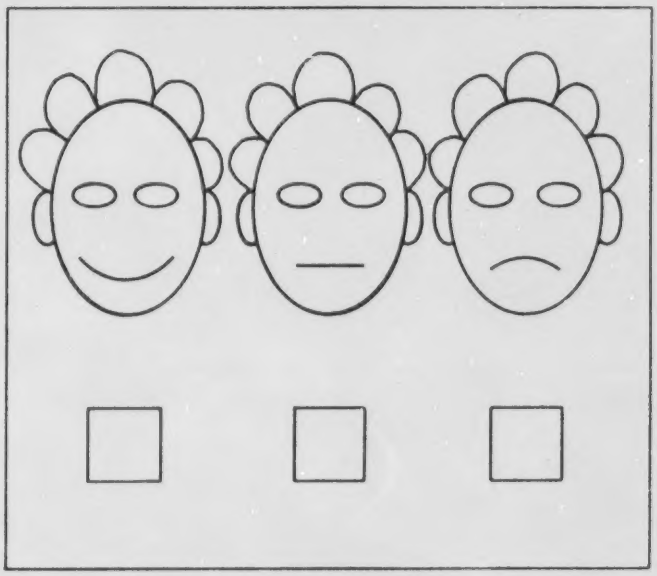
Rita is playing with Nancy at school.



Rita says, "I don't like the neighborhood where I live. Everything is so ugly."



She says, "Is your neighborhood nice, Nancy?"



Which one is Nancy's face?

Appendix B

Purdue Social Attitude Scales
Experimental Edition II

APPENDIX-B

Test Booklet

JUL 0 8 1974

PURDUE SOCIAL ATTITUDE SCALES
FOR
PRIMARY GRADE CHILDREN

EXPERIMENTAL EDITION II

VICTOR G. CICIRELLI

Name _____ Grade _____ Age _____ Sex _____

School _____ Teacher _____ Date _____

Pursuant to Office of Economic Opportunity Contract No. CG-5655

TO THE EXAMINER

This test is intended for small group administration. While the largest group size in which it is feasible to administer the test has not been established, it is presently recommended that groups be no larger than 10-12 children.

If the test is to be used for individual administration, the same instructions are to be followed.

This booklet contains 40 cartoon-type picture stories. The examiner will read the legend under each picture to the child. The child will then select the face which he thinks properly completes each story and place a pencil-mark in the small box under that face.

The scoring sheet found at the back of the test booklet may be used to obtain scores for the four subscales if hand scoring is desired. A score of "5" is given for the most positive response to an item (face with largest smile), "4" for a less positive response, "3" for a neutral response, "2" for a slightly negative response, and "1" for the most negative response (most sad or angry). Scores for the indicated items are summed to yield a subscale score.

INSTRUCTIONS FOR ADMINISTRATION

The test will take about 30 minutes, but there is no time limit. Proceed to the next item when all children have finished marking their choices.

The examiner begins by reading the following statment to the children:

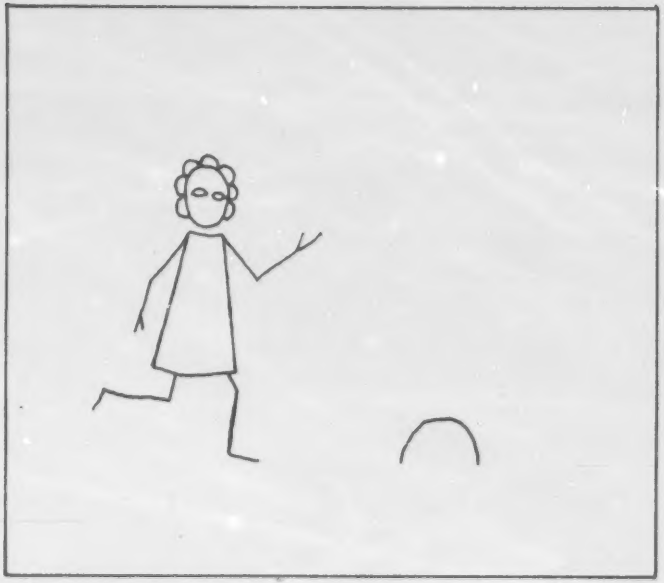
Each page in this booklet has a little picture story. I will tell you what each picture is about, but **you** will need to finish each story the way **you** think it should be. (There is no "right" ending to the story—you just pick the ending you like.)

Now, let's turn to the first page.

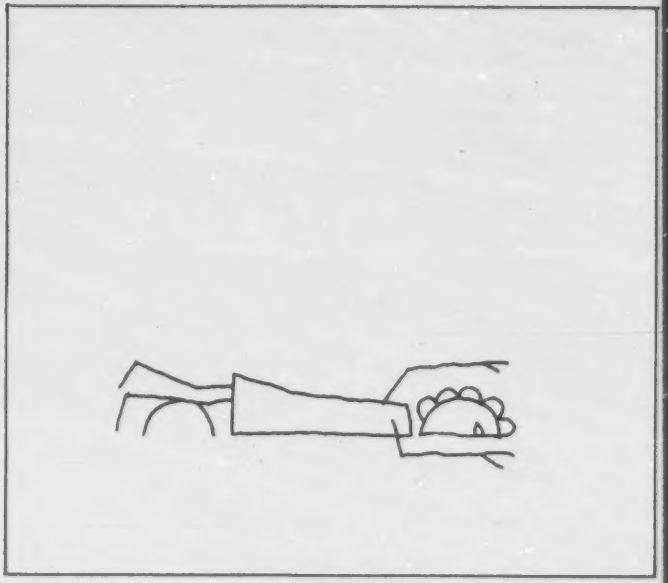
Check to see that all children have turned to the right. Then read example. After reading example, check to see that each child has marked one and only one box.

Proceed with the test items in similar fashion.

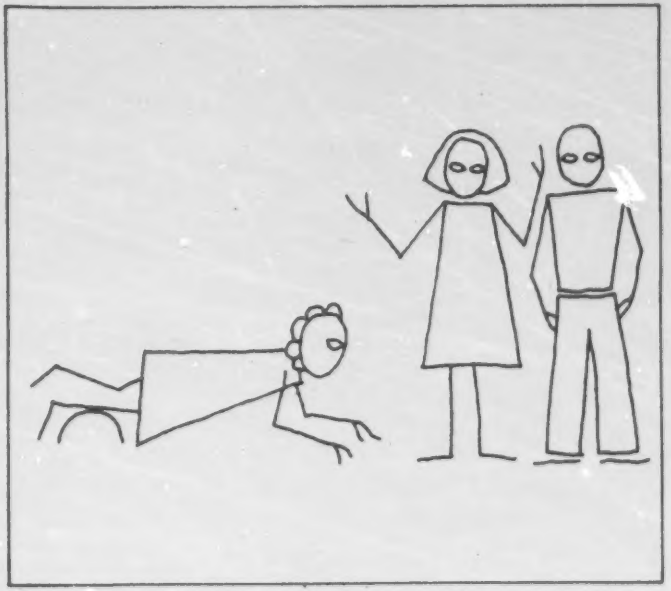
EXAMPLE



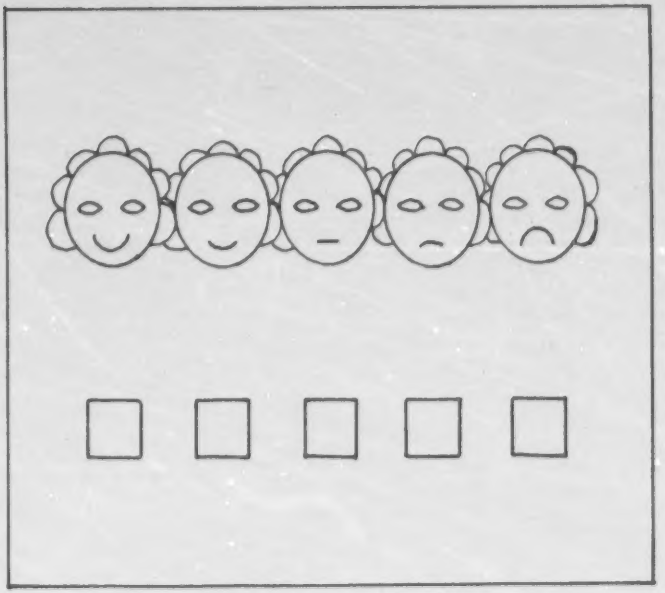
Mary is running.



She falls down.

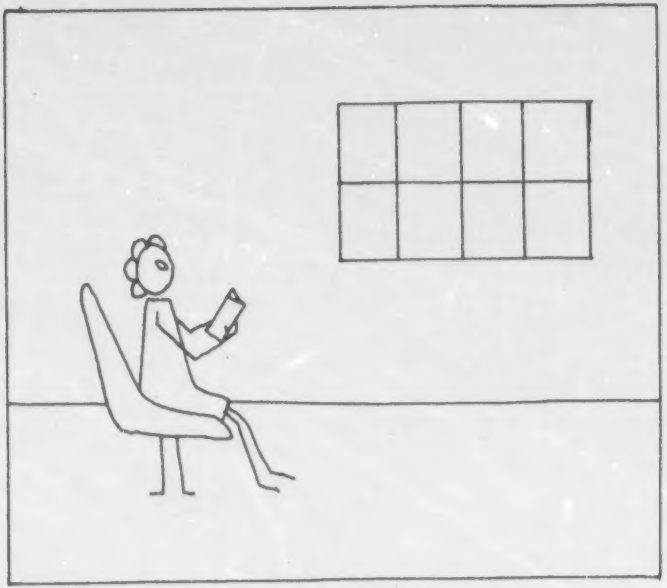


Some other children come to see what happened.

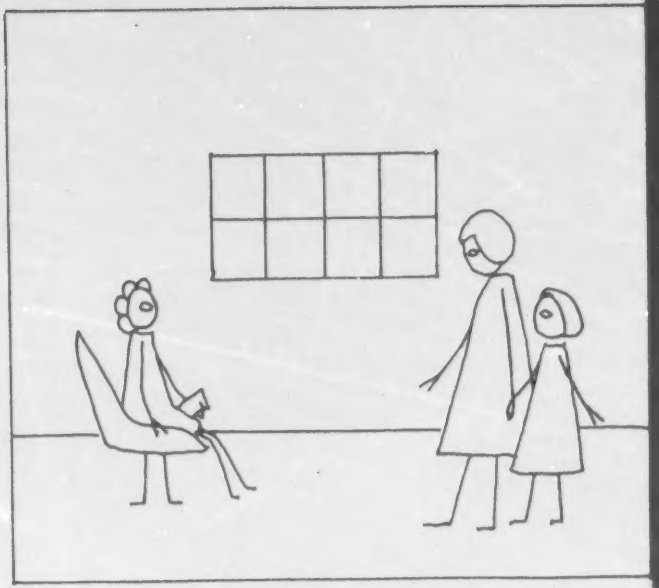


Which face is Mary's face? Take your pencil and make a mark in the little box under the face you think is Mary's.

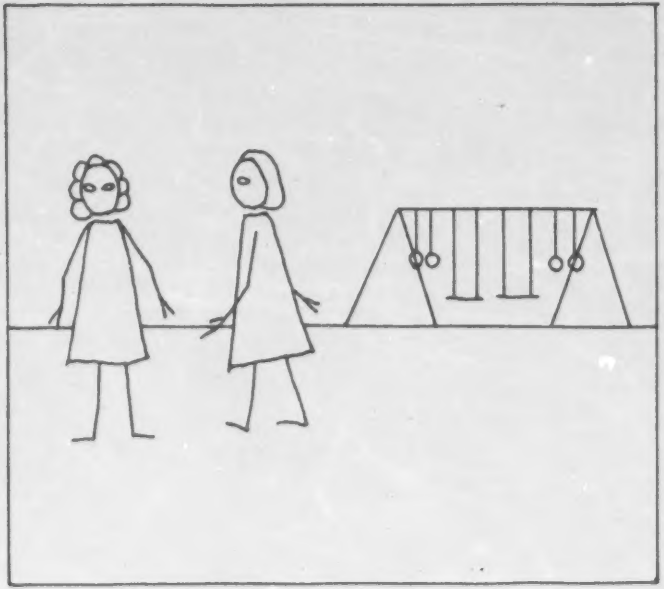
P-1



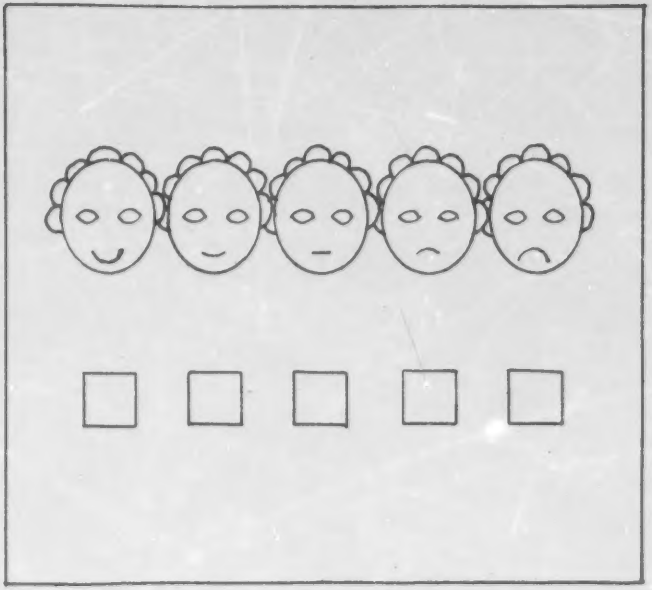
Sally is at school.



A new girl comes to the class.

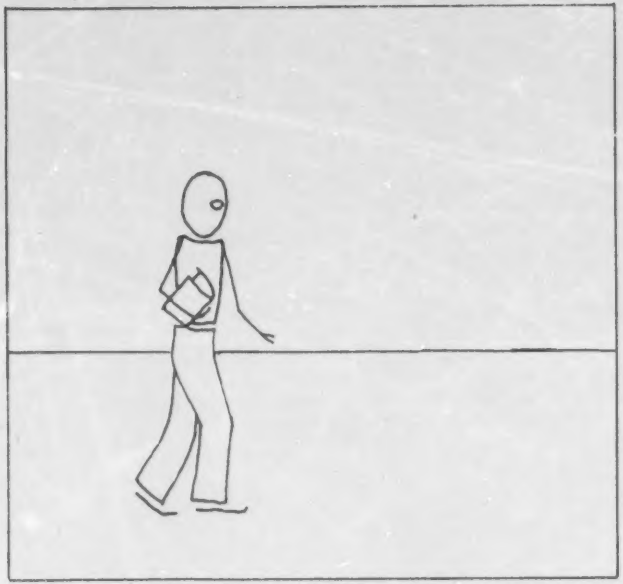


At recess, the new girl comes over to Sally.

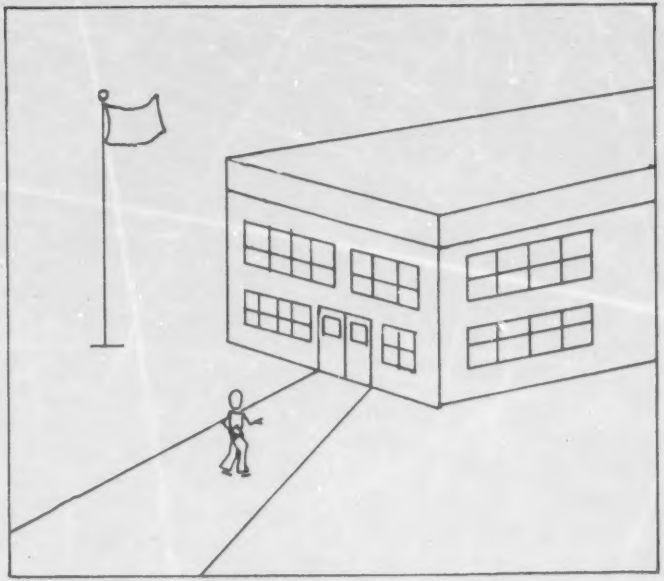


Which one is Sally's face?

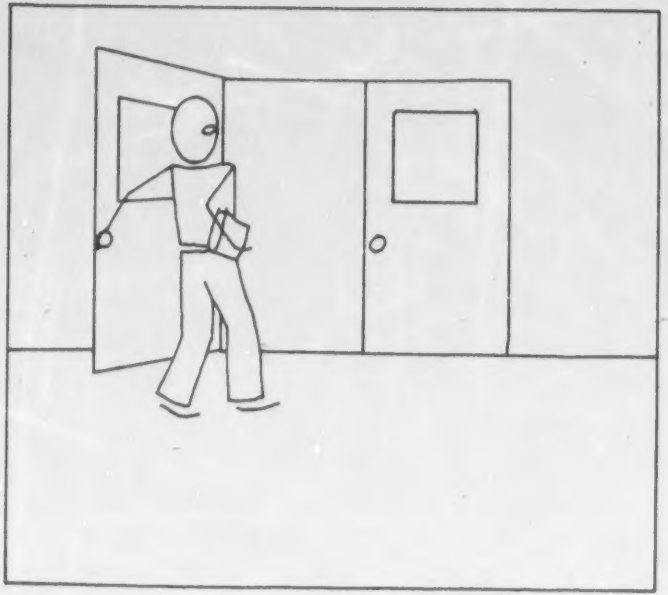
S-2



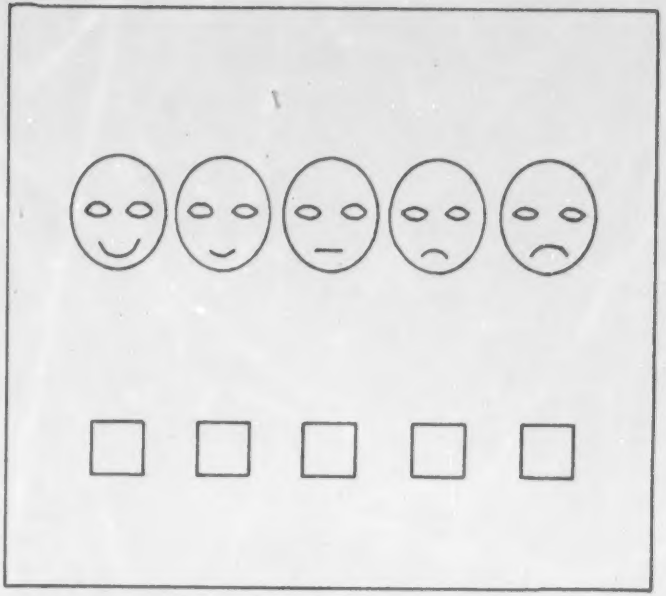
Bobby is on his way to school.



He gets to school.

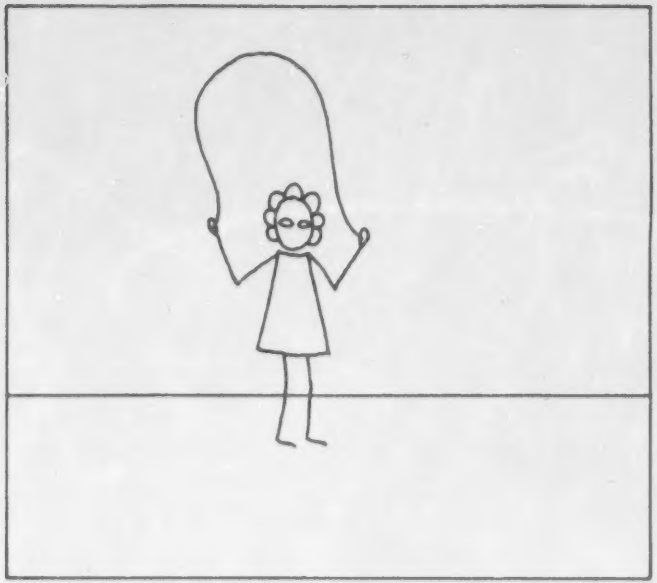


He opens the door and goes inside.

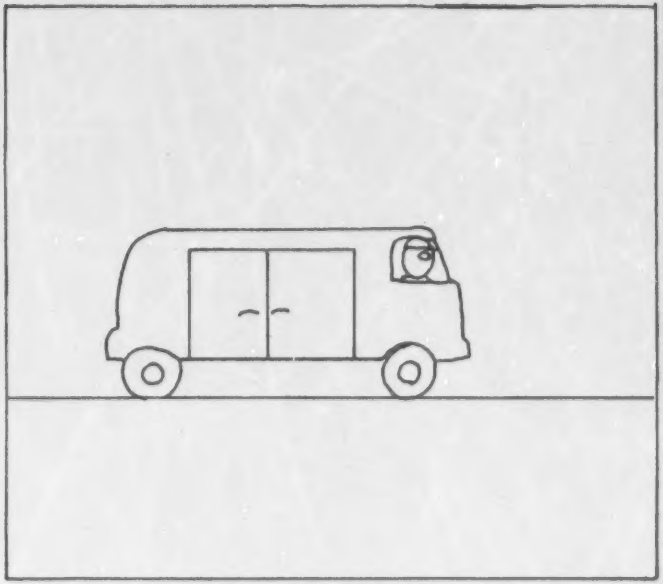


Which one is Bobby's face?

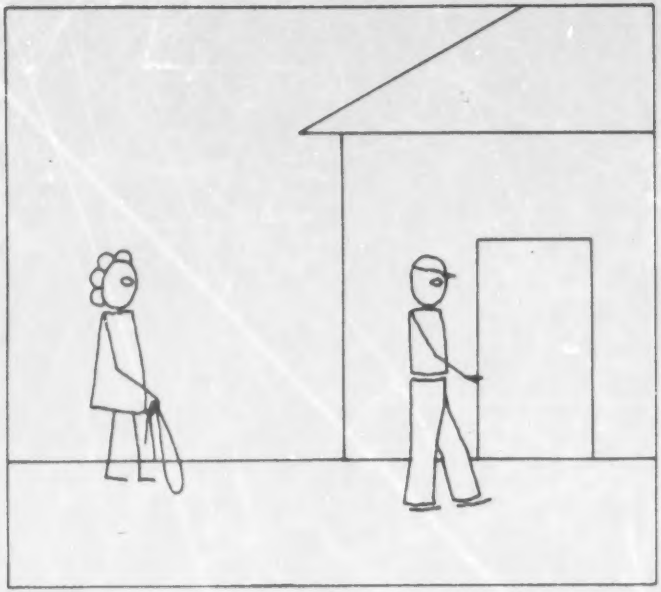
C-3



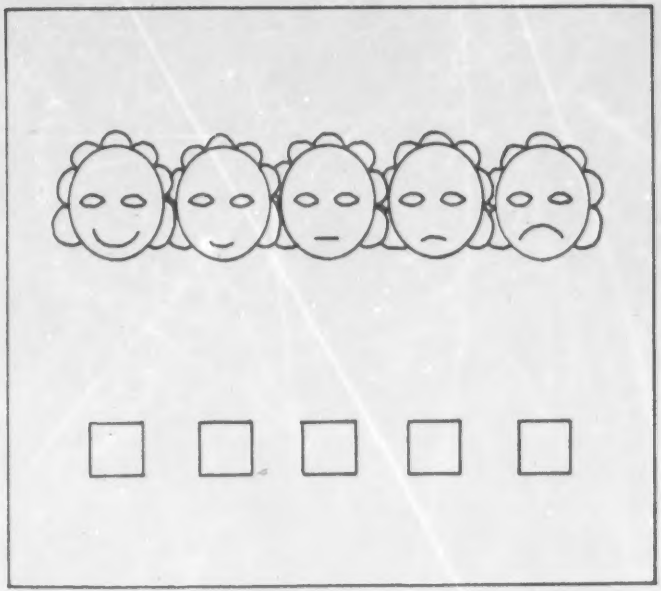
Polly is playing outside.



A repairman stops his truck at Polly's house.

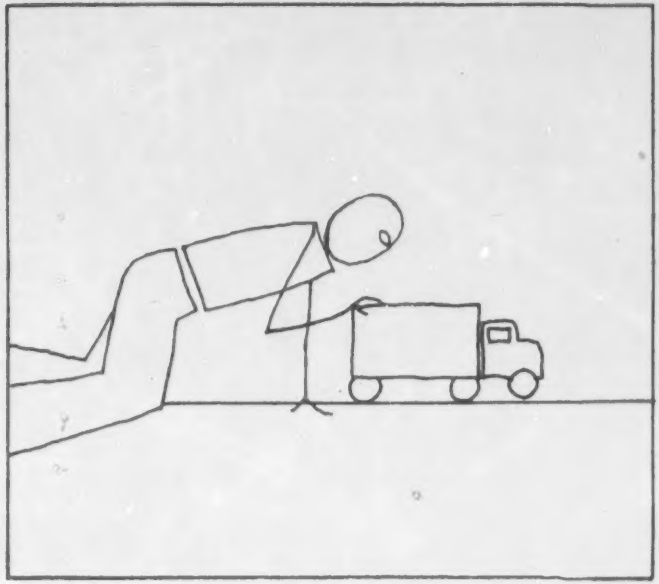


Polly sees him go to her door.

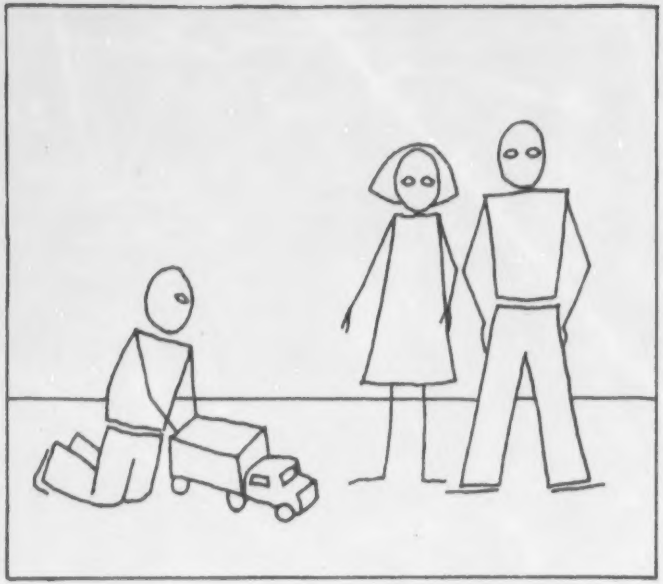


Which one is Polly's face?

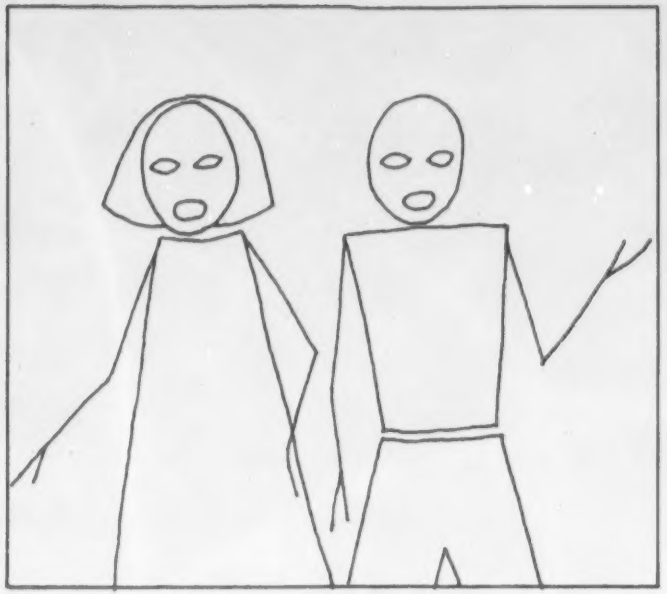
H-4



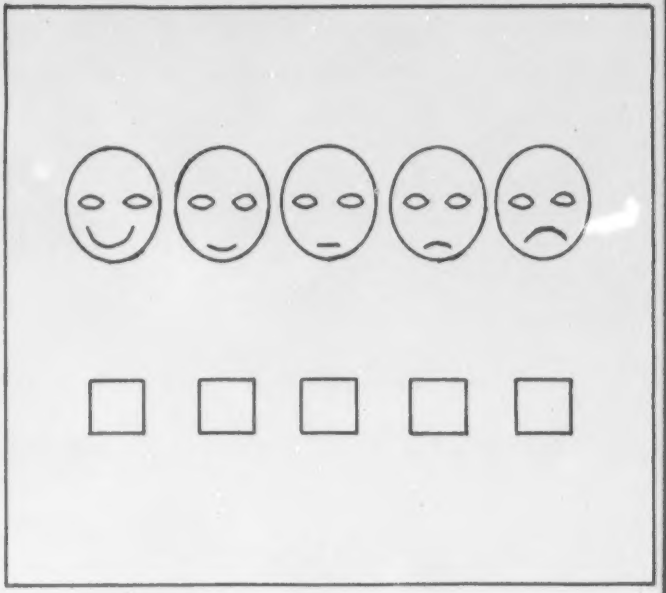
Joe is playing at home.



He sees his brother and sister coming.

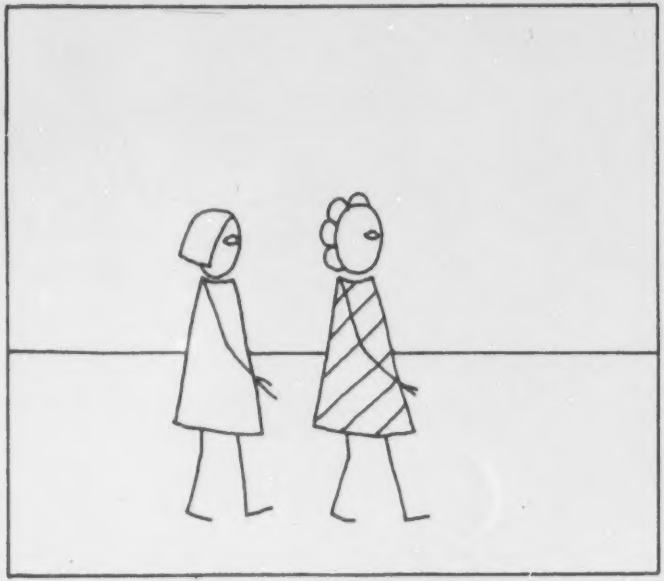


They say, "Joe, can we play too?"

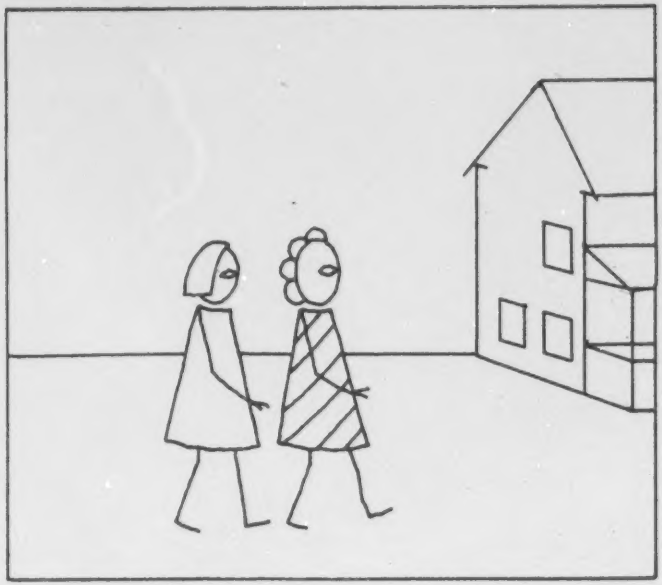


Which one is Joe's face?

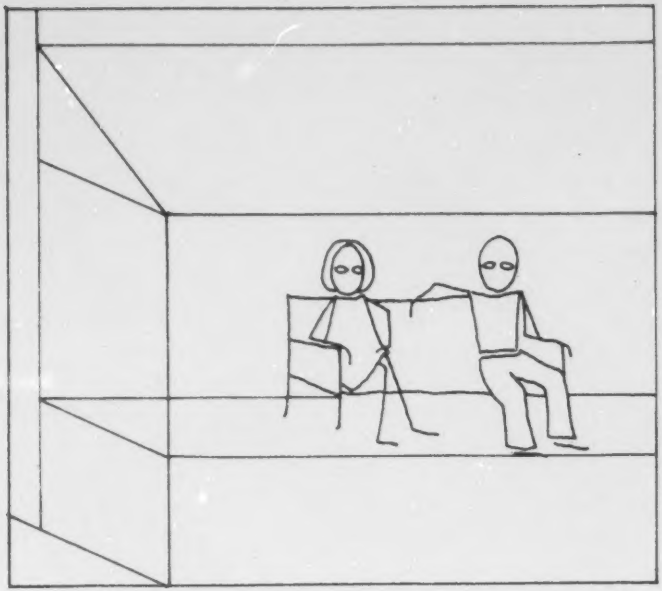
C - 5



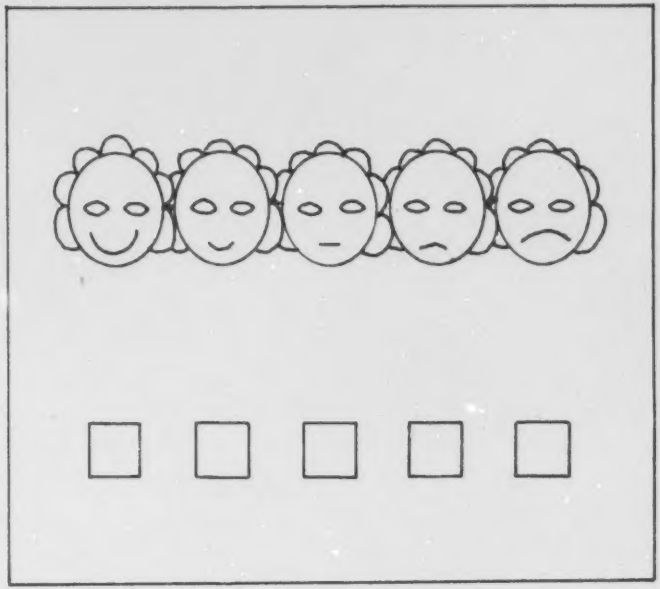
Lynn and her friend are walking to the store.



They pass a house in their neighborhood.

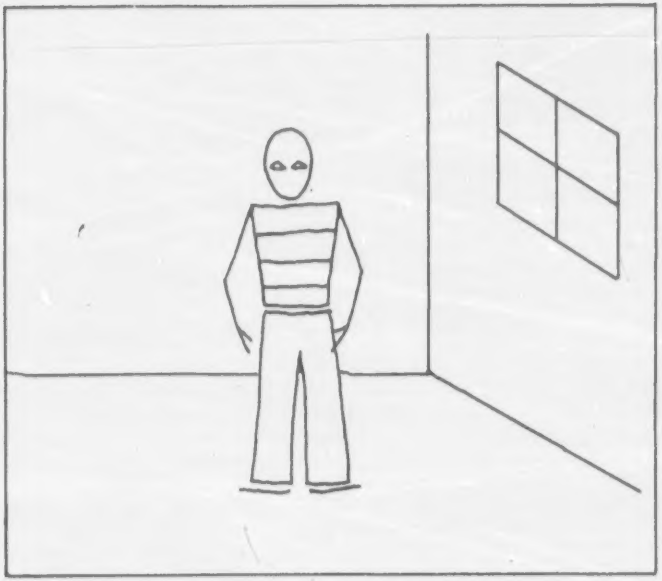


Some people are sitting on the porch.
Lynn says, "Oh, they're looking at us!"

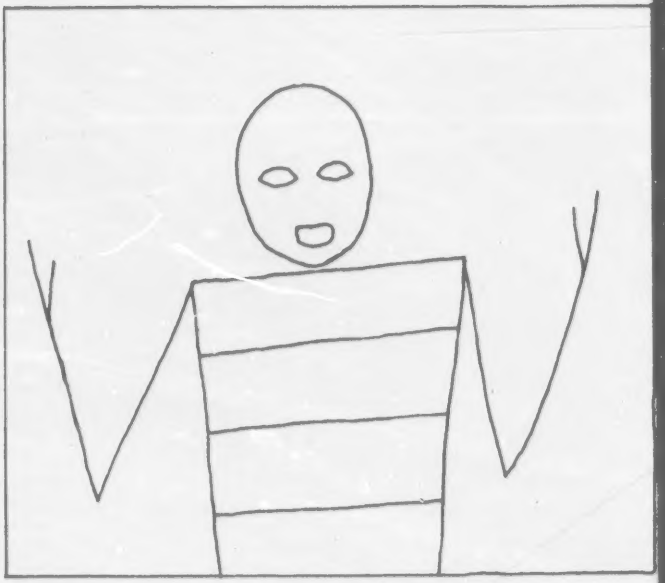


Which one is Lynn's face?

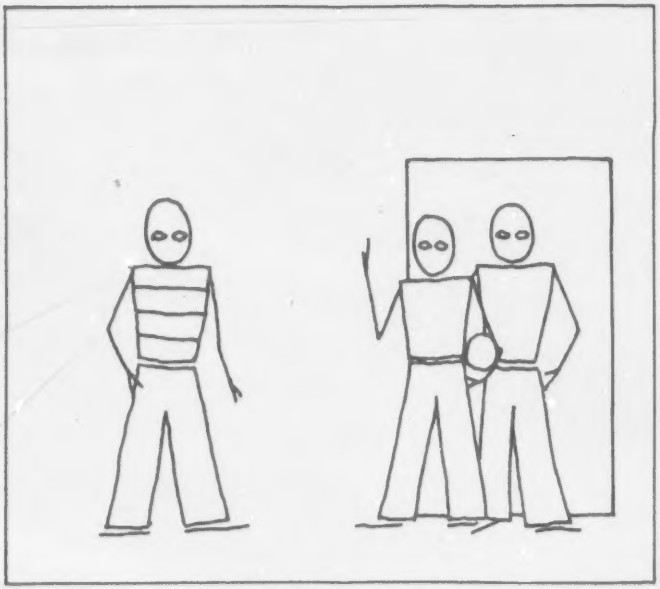
P-6



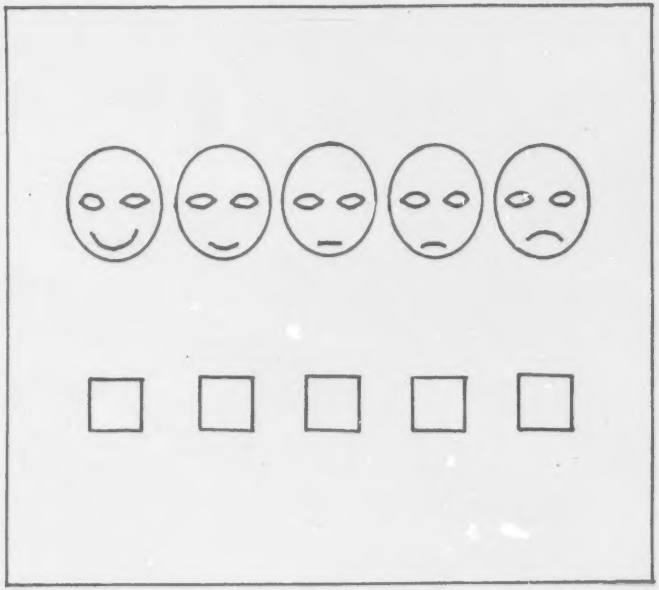
Jerry is at home.



He says,"I don't know what to do

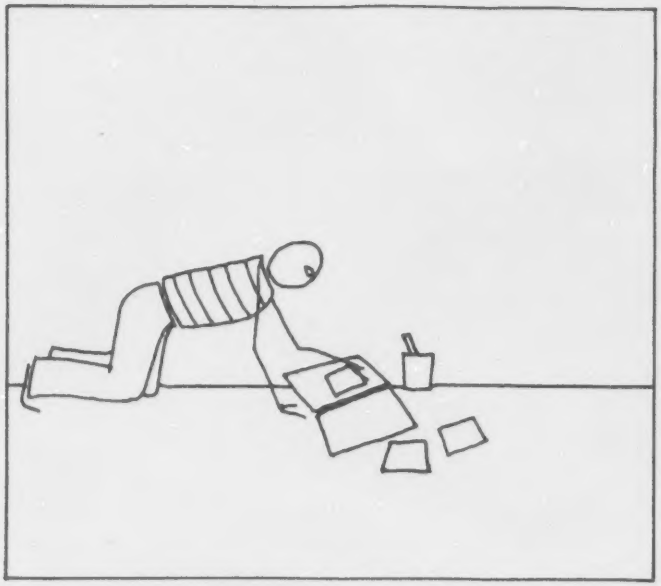


Some boys come to ask him to play.

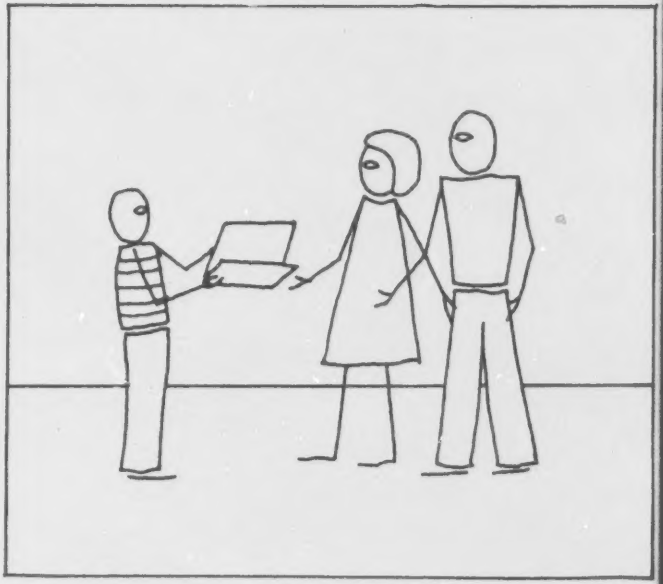


Which face is Jerry's?

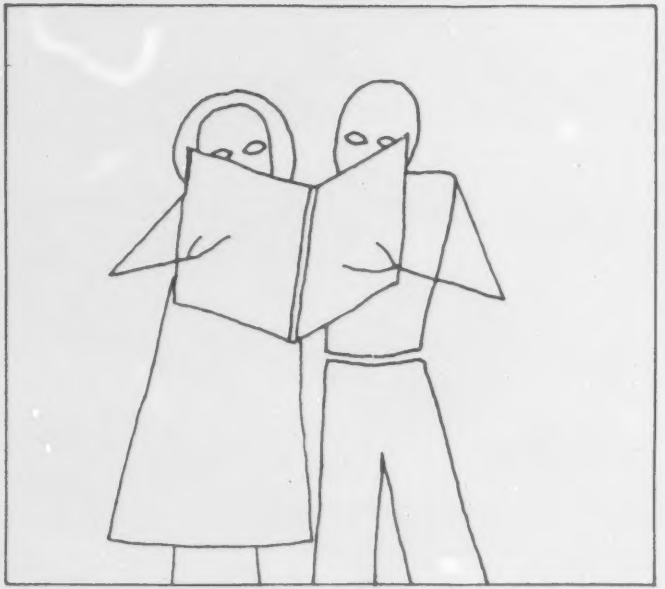
H-7



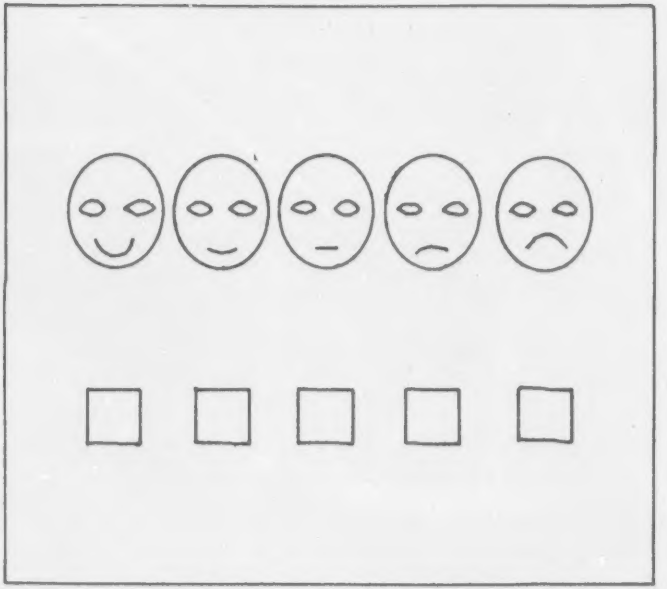
Hank is pasting pictures in a book.



He shows it to his mother and father.

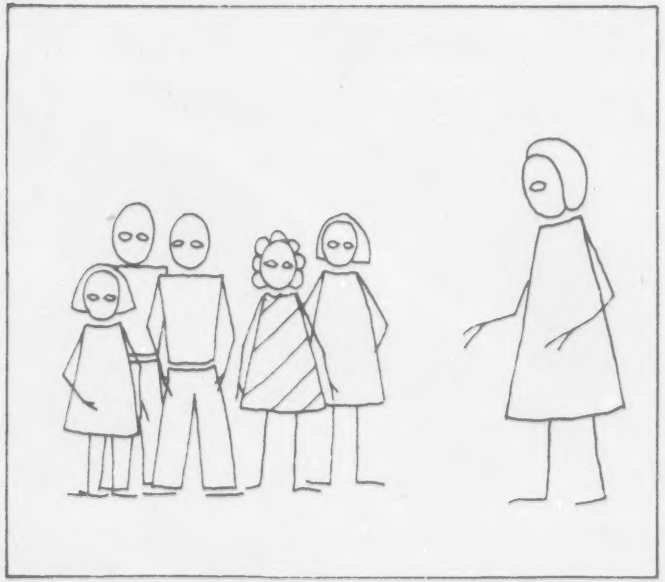


They look at it.

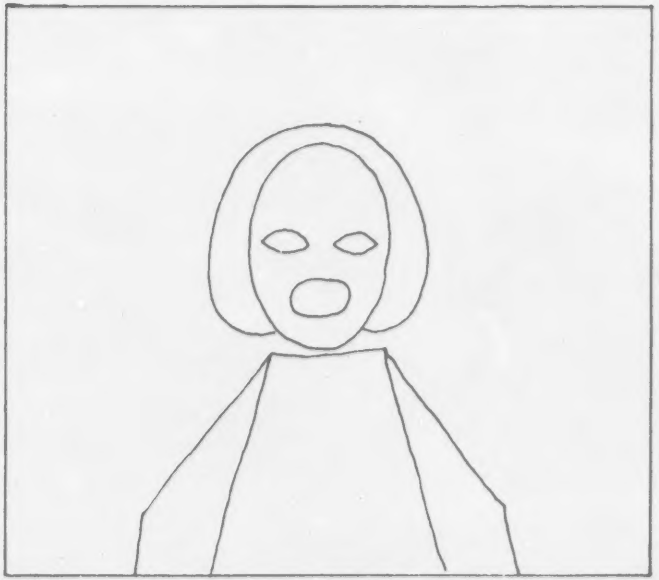


Which way do they look?

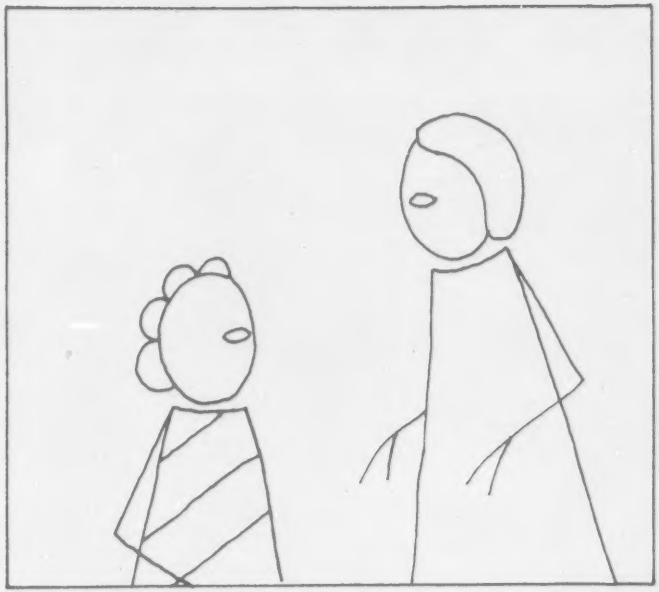
S-8



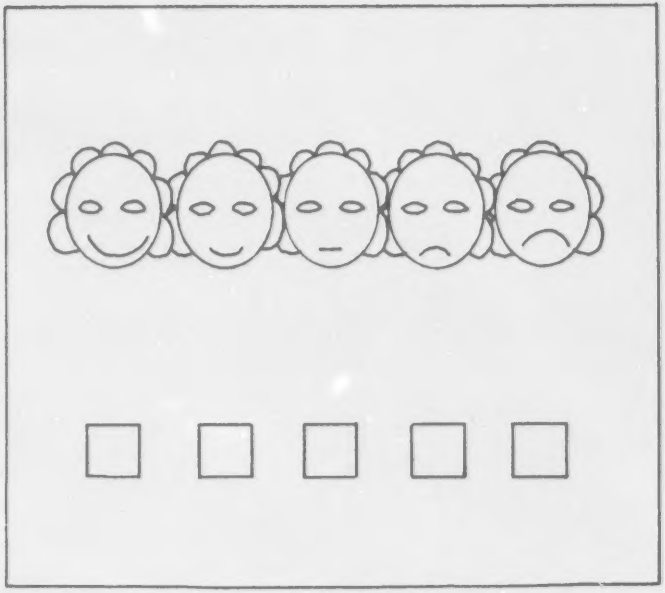
The teacher says, "The school will be open on Saturday. You can come to read, play games, or to make things."



The teacher says, "Do you want to come?"

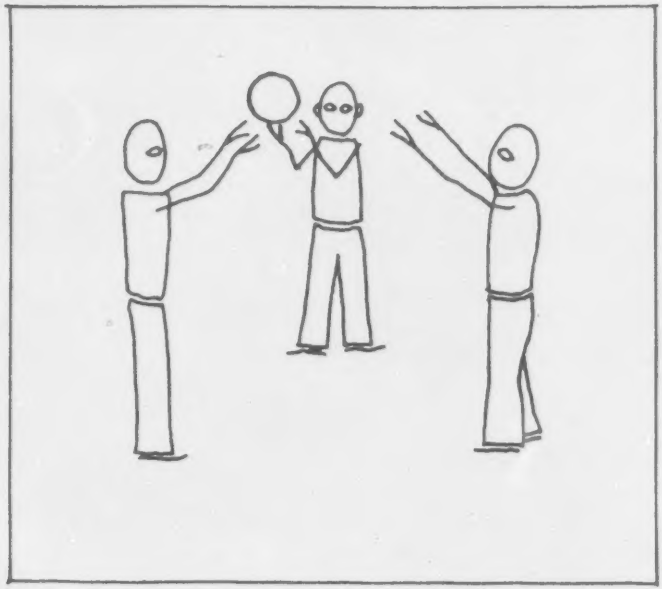


She looks at Jane.

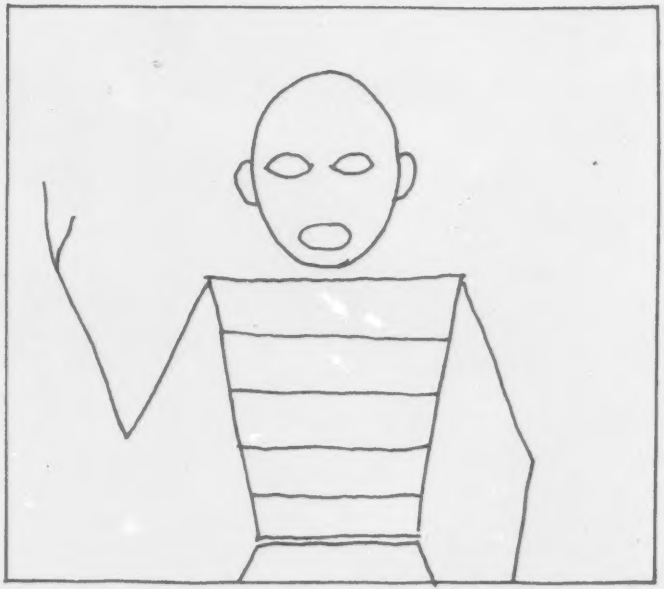


Which one is Jane's face?

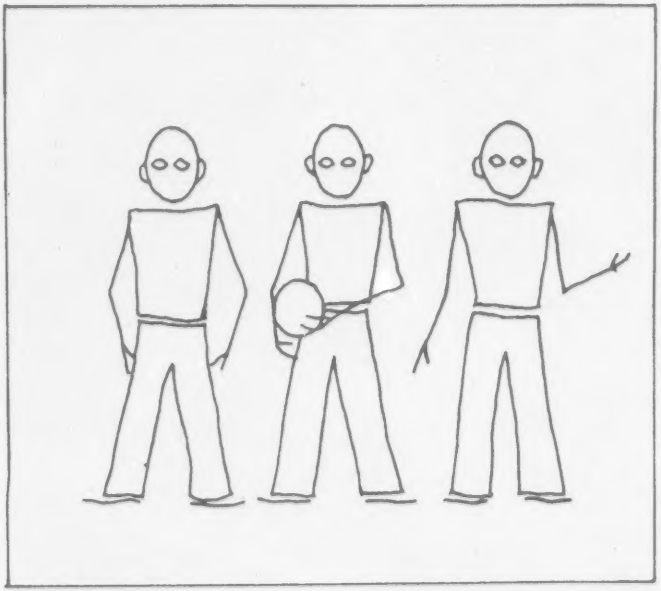
P-9



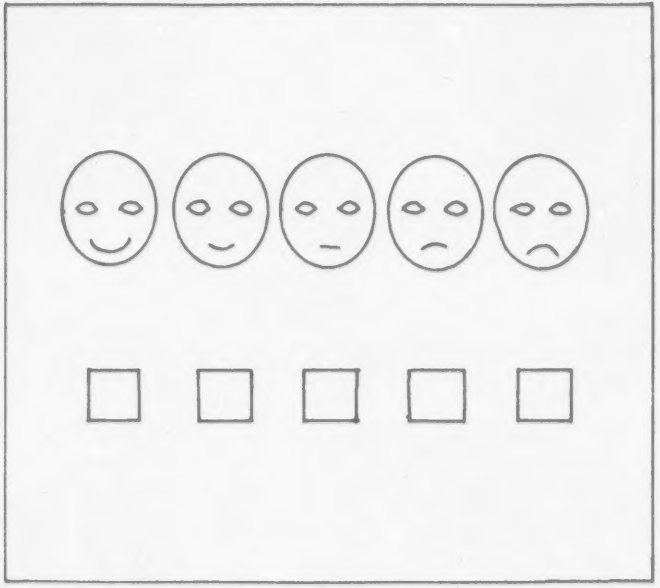
The boys are playing a game.



Don says, "I want to play the game with you."

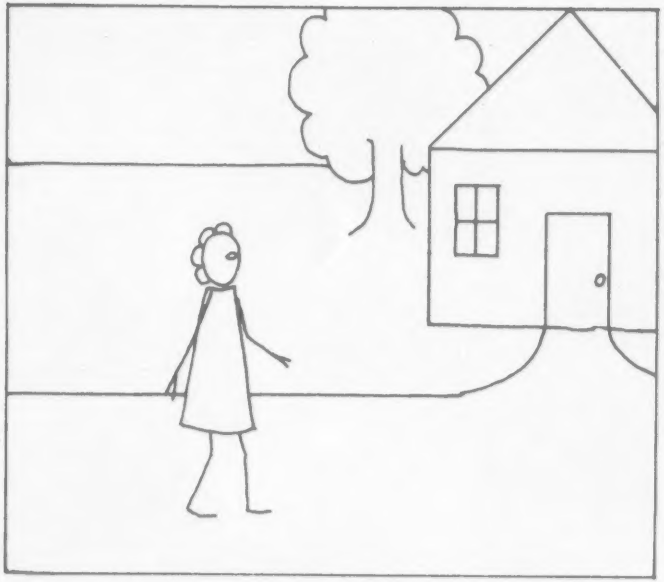


The boys say, "O.K., but but you must obey all our rules."

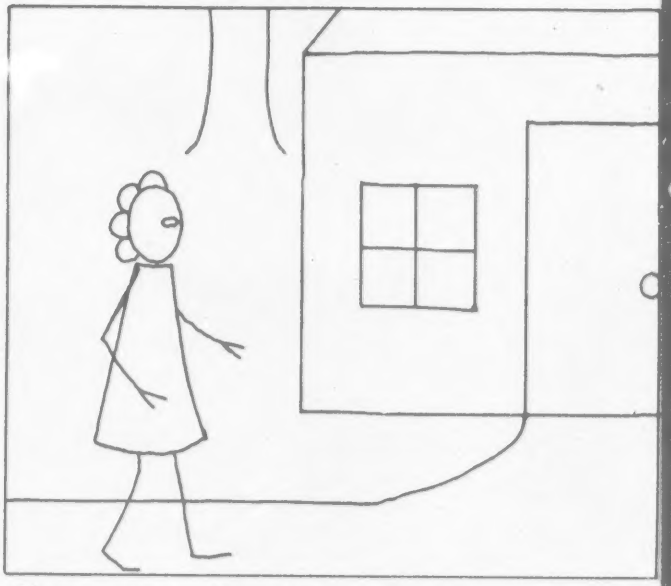


Which face is Don's?

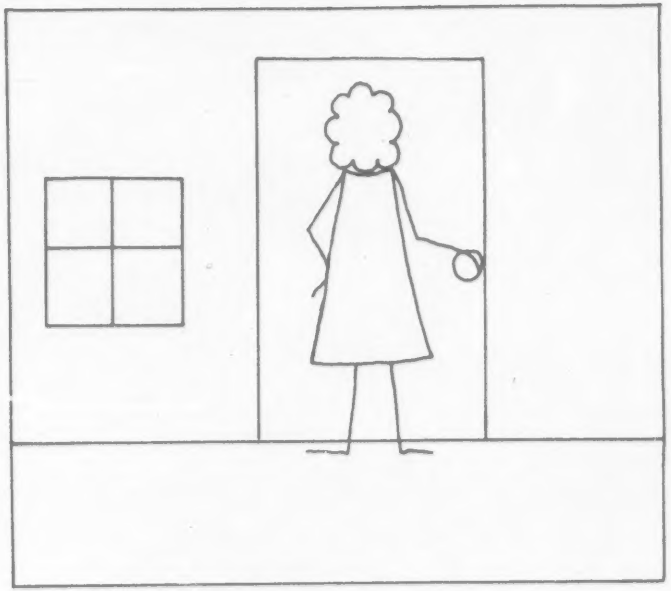
H-10



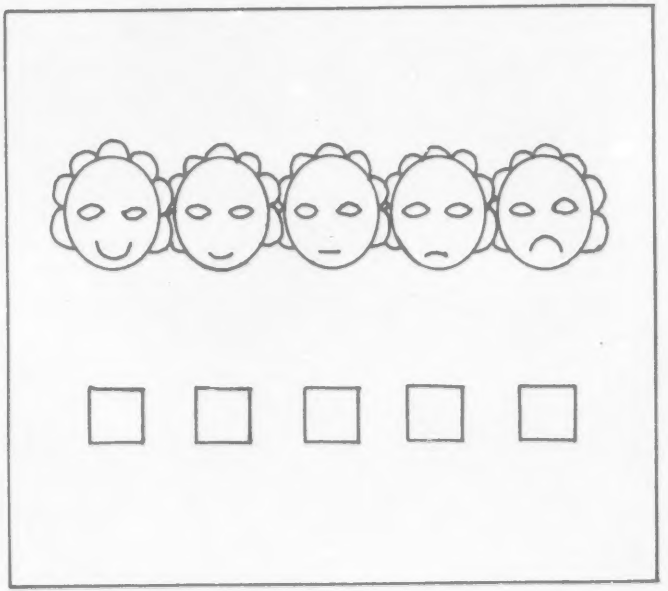
May is on her way home.



She gets to her house.

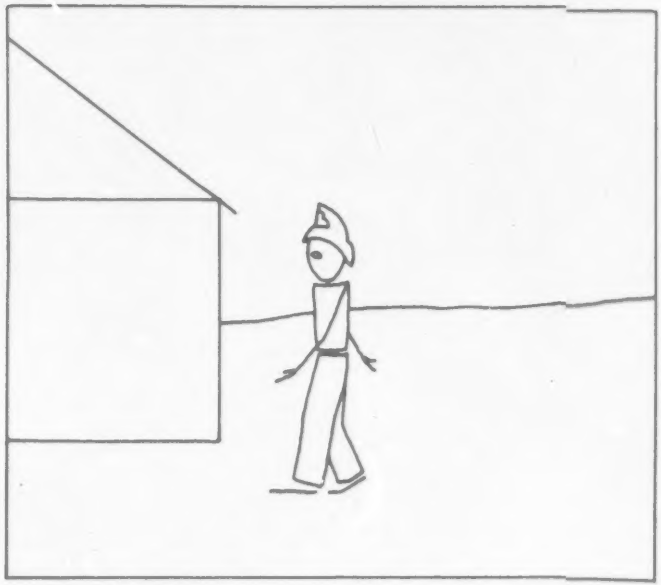


She opens the door.

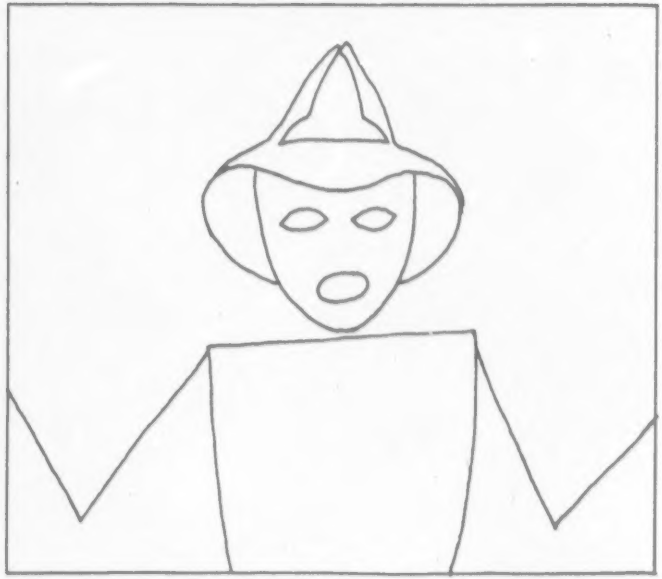


Which face is May's?

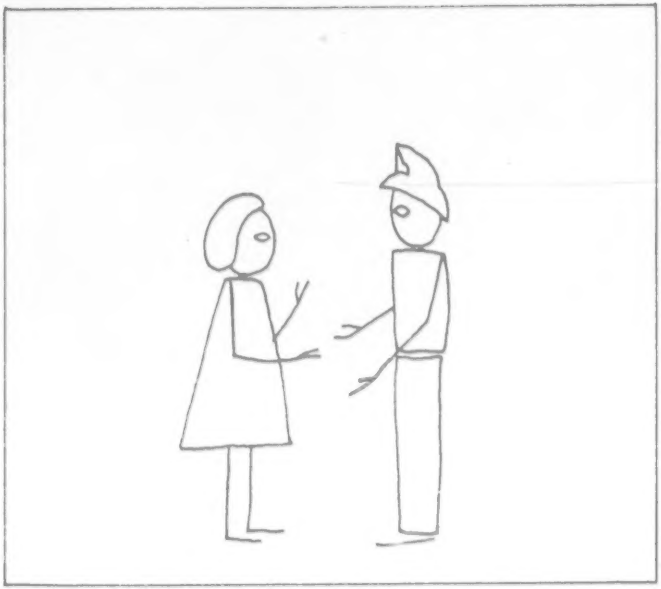
C-11



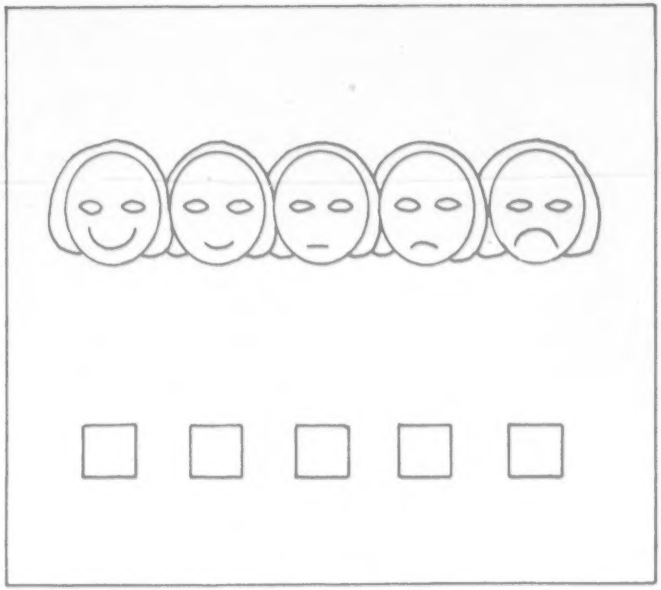
A fireman comes to Tony's house.



He says,"I want to look around in your house to see that it is safe."

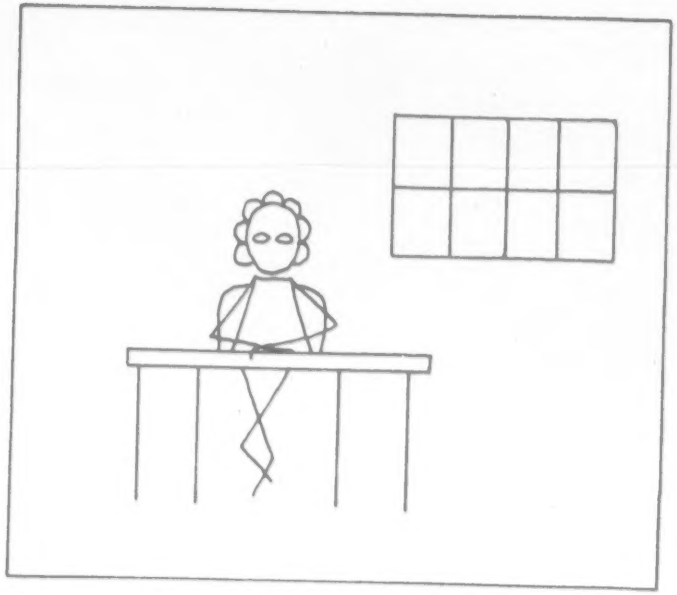


Tony's mother talks to the fireman.

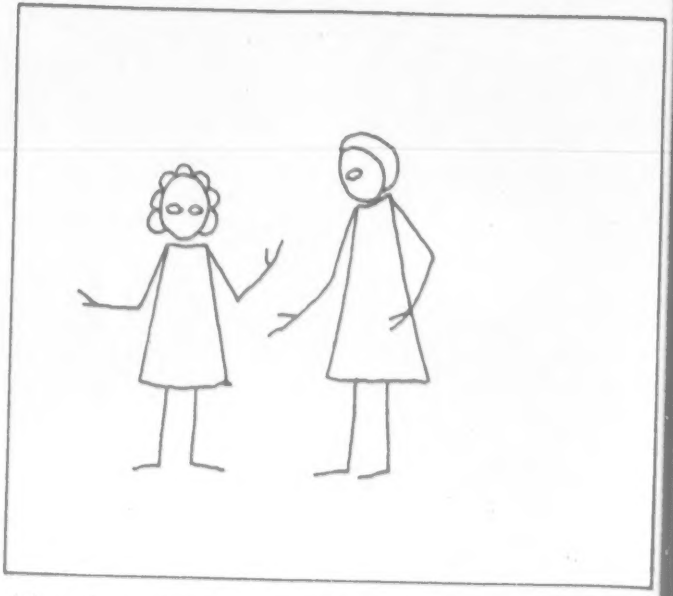


Which one is her face?

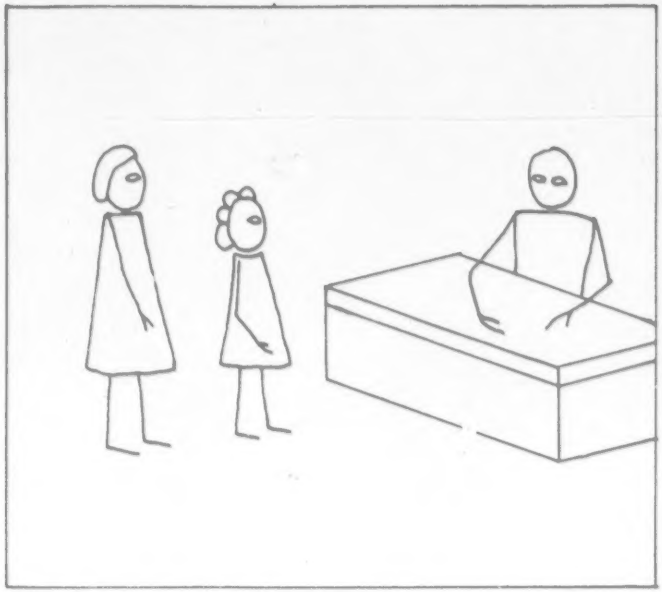
S-12



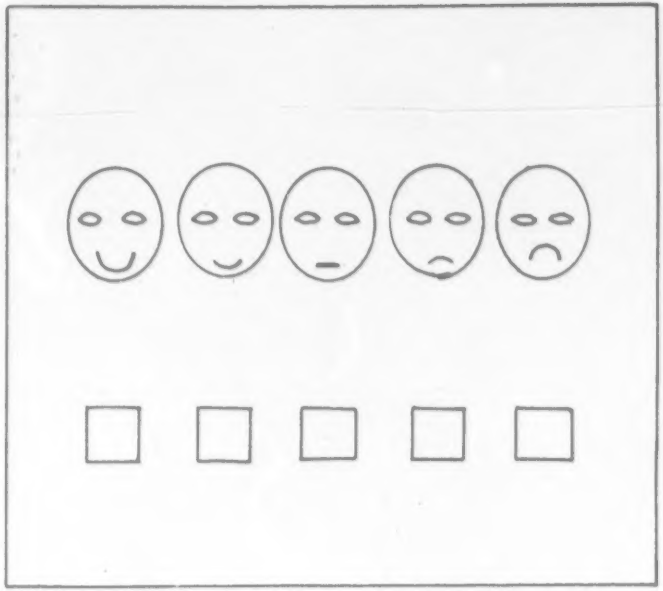
Ann is at school.



Her teacher says, "Come to the office with me, Ann, the principal wants to see you."

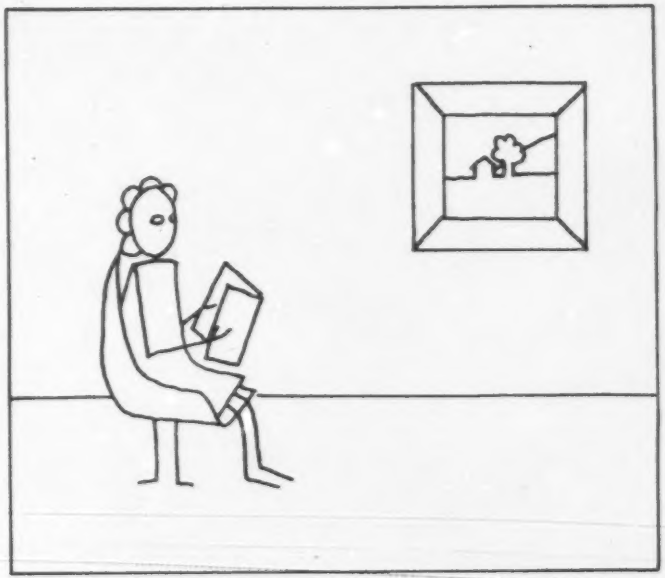


They get to the office. Ann sees the principal.

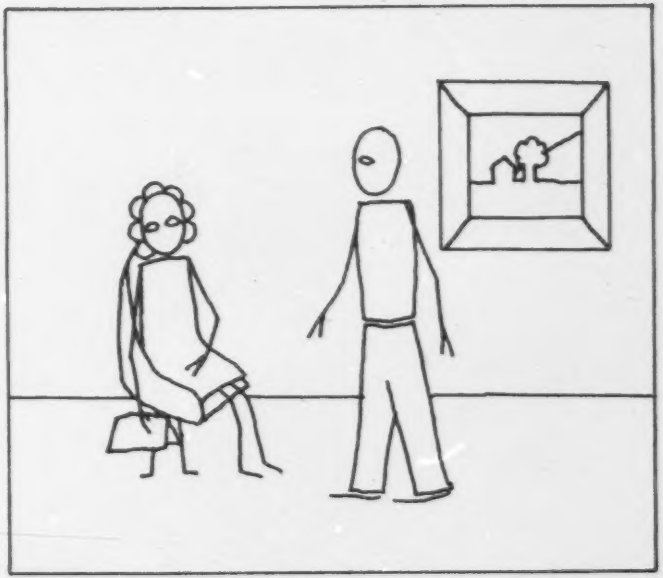


Which one is his face?

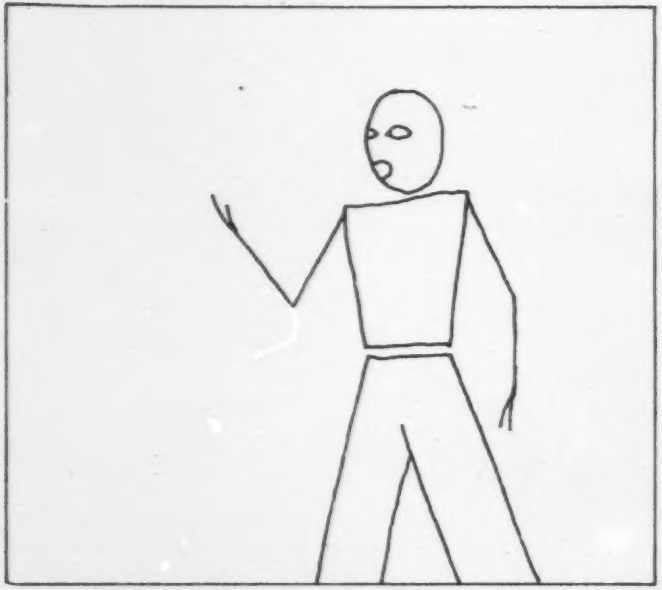
H - 13



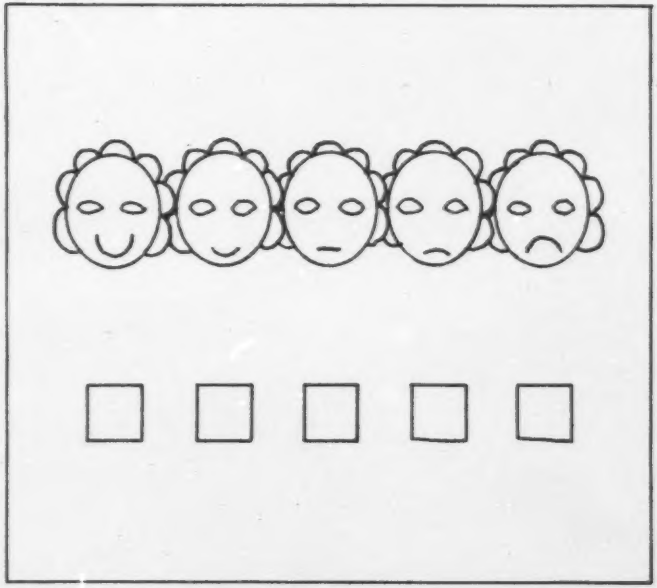
Jill is at home.



Her father comes in.

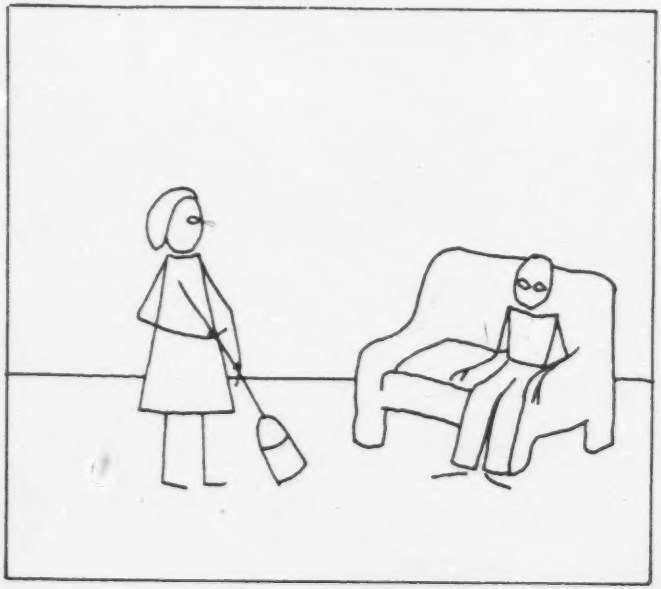


Her father says, "Come here, Jill. I want to talk to talk to you about something."

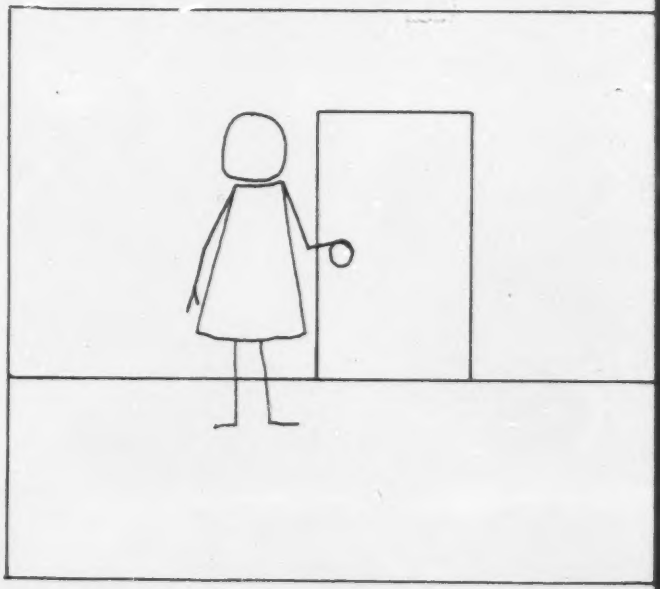


Which face is Jill's?

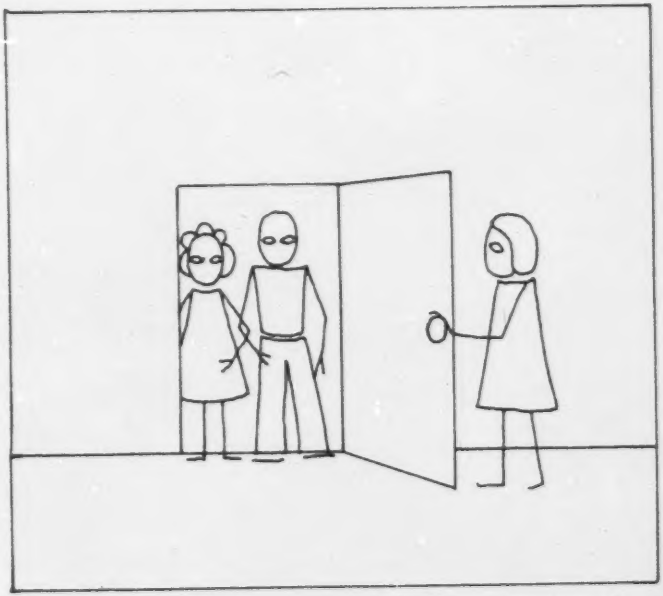
C-14



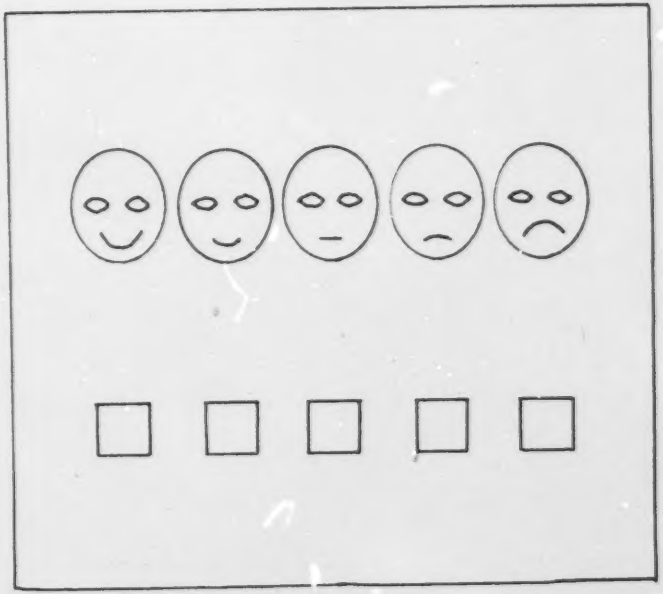
Mike is at home with his mother.



Someone knocks. Mike's mother goes to the door.

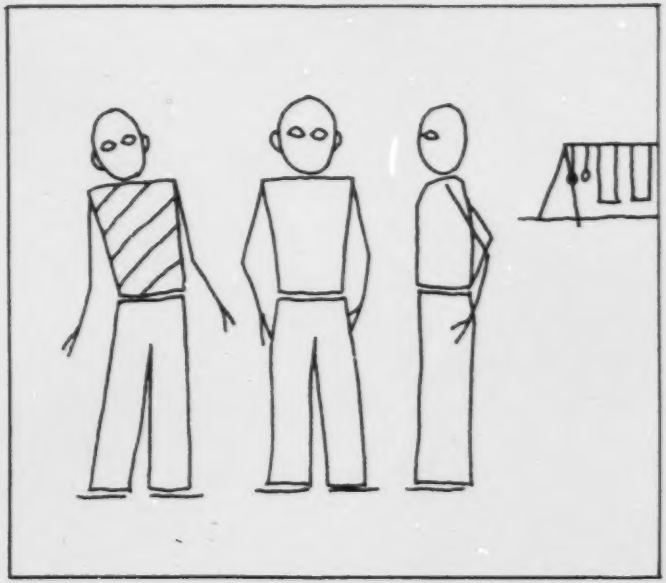


Some neighbors are there.

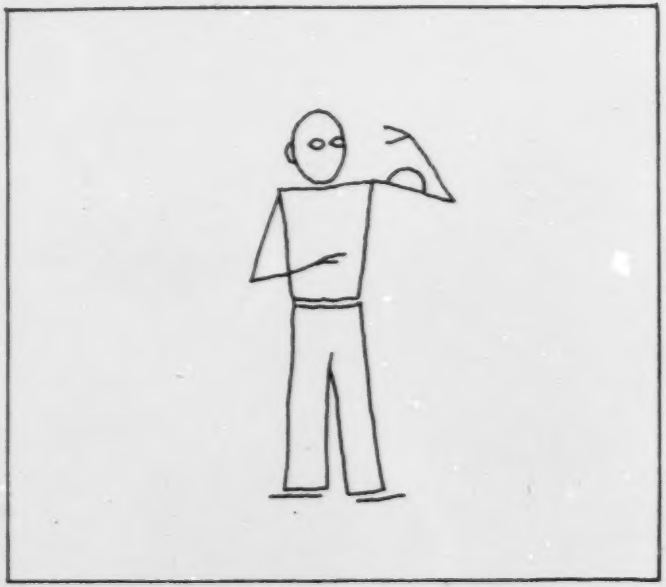


Which one is Mike's face?

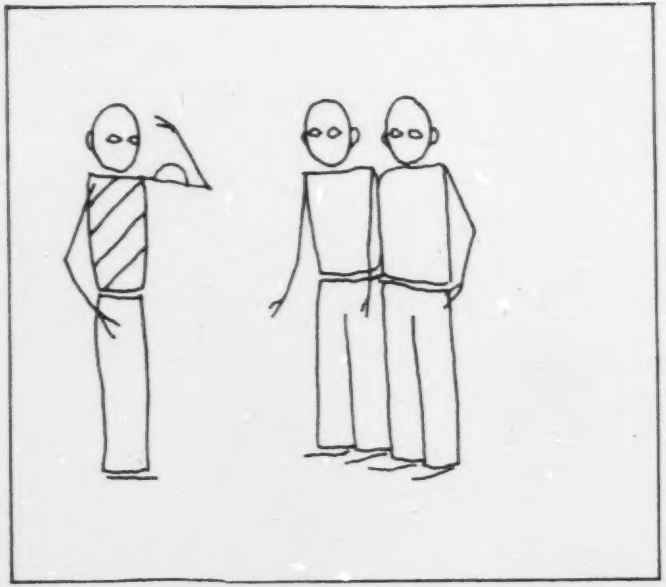
P-15



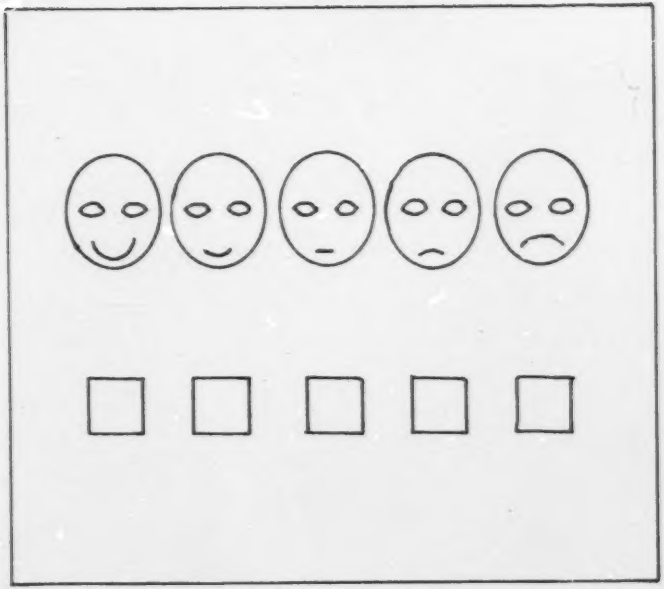
The boys are on the playground.



Each one is showing how strong he is.

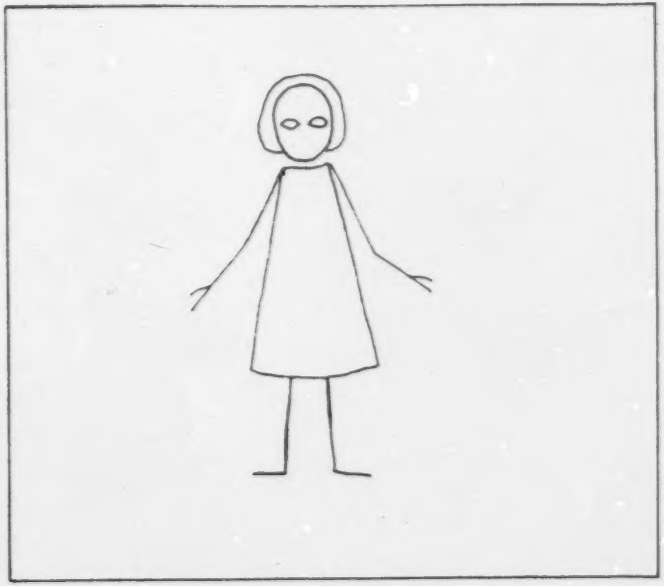


It is Carl's turn. The boys are watching him.

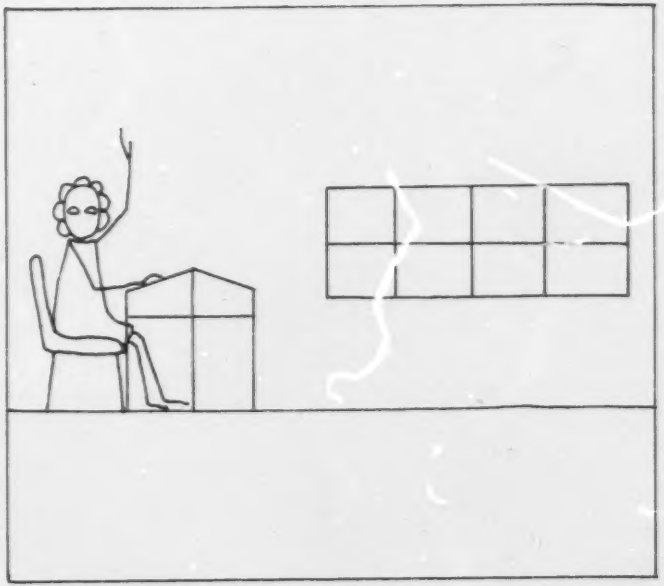


Which face is Carl's?

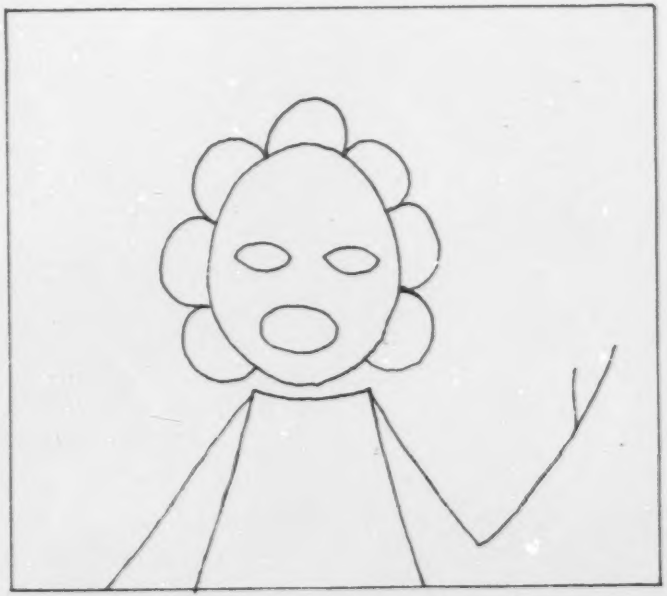
S-16



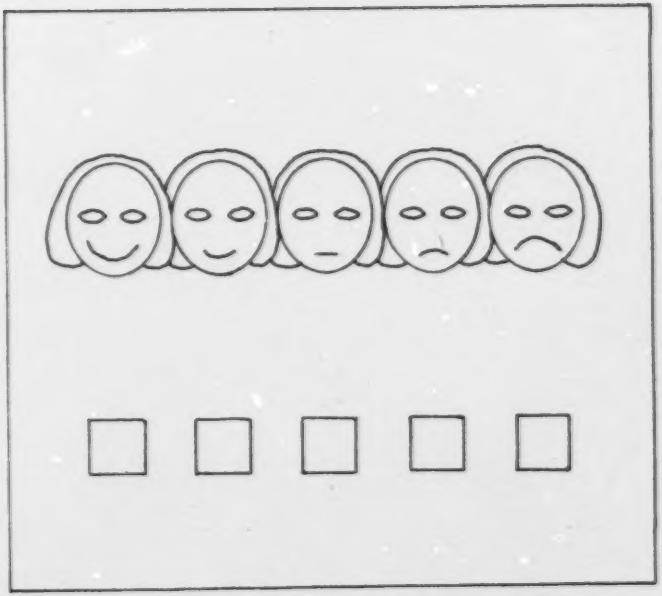
The teacher says,"Class, let's put our chairs together in a circle."



Kathy raises her hand.

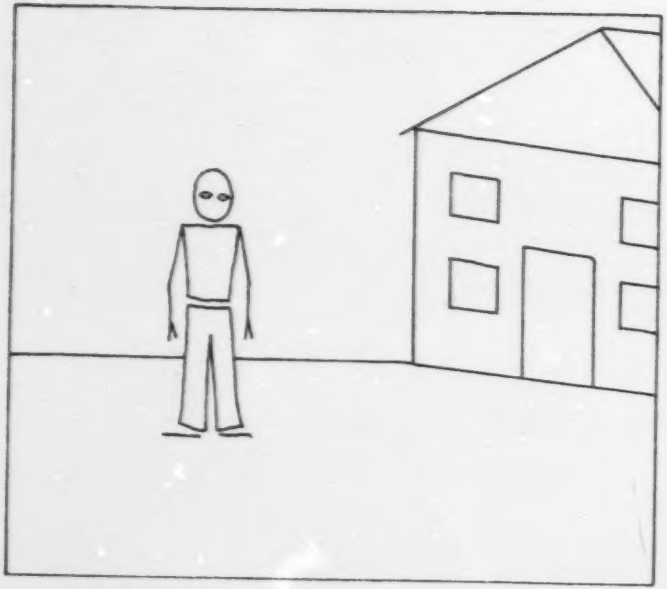


Kathy asks to sit next to teacher.

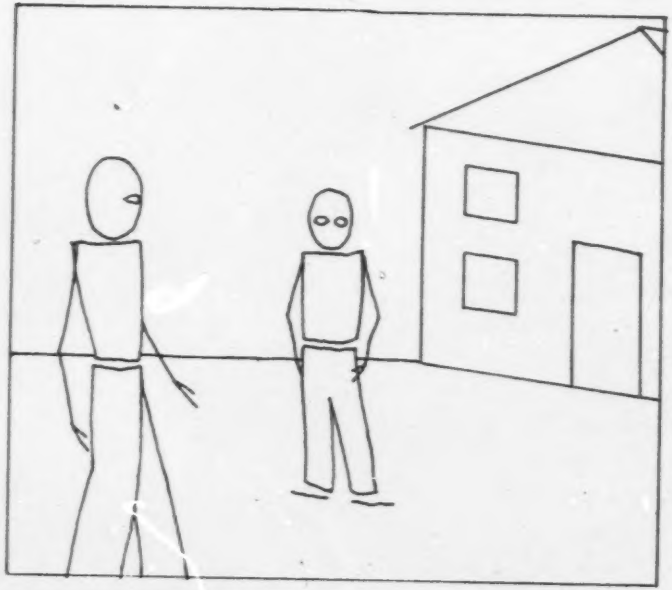


Which one is the teacher's face?

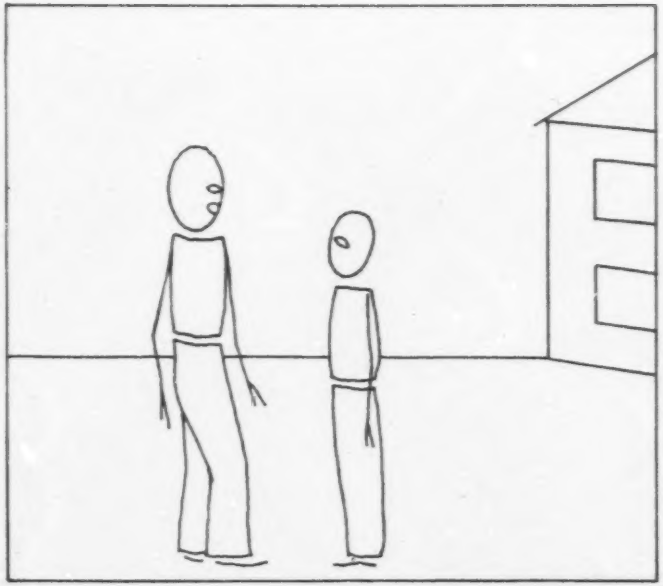
C-17



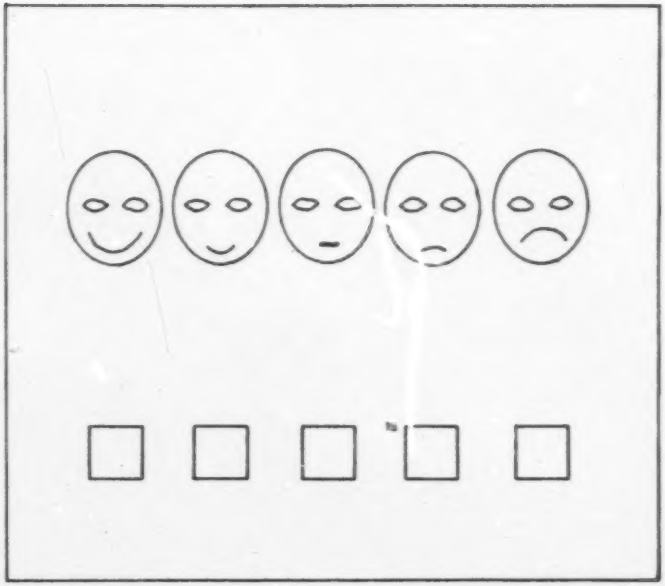
Steve is outside his house.



Steve sees the neighbor man coming up to his house.

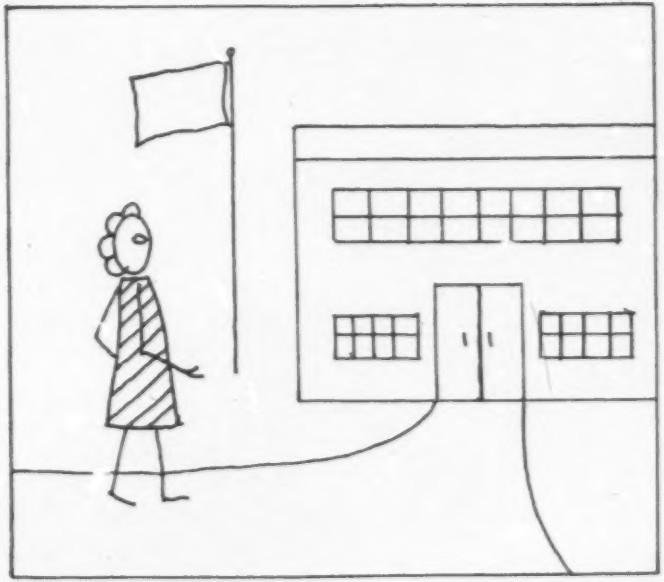


The neighbor man stops to talk to Steve.

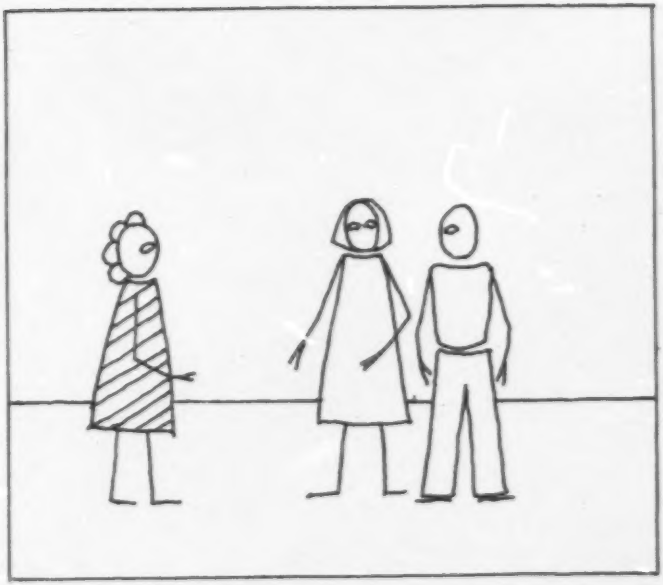


Which face is the neighbor man's?

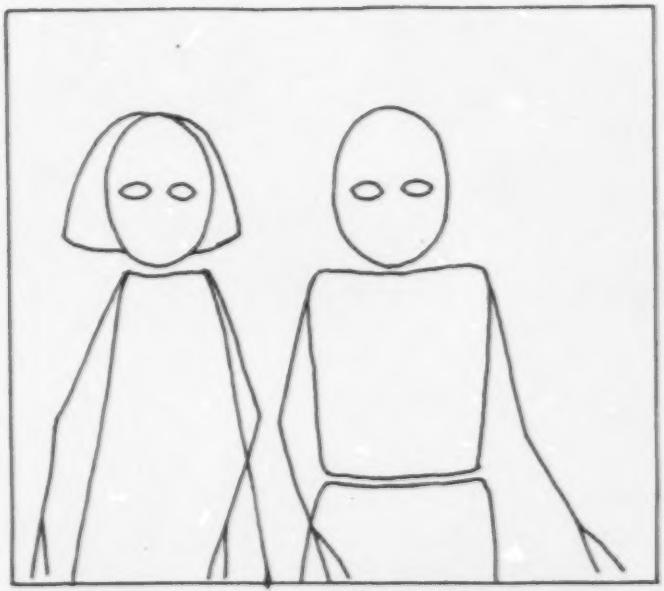
P-18



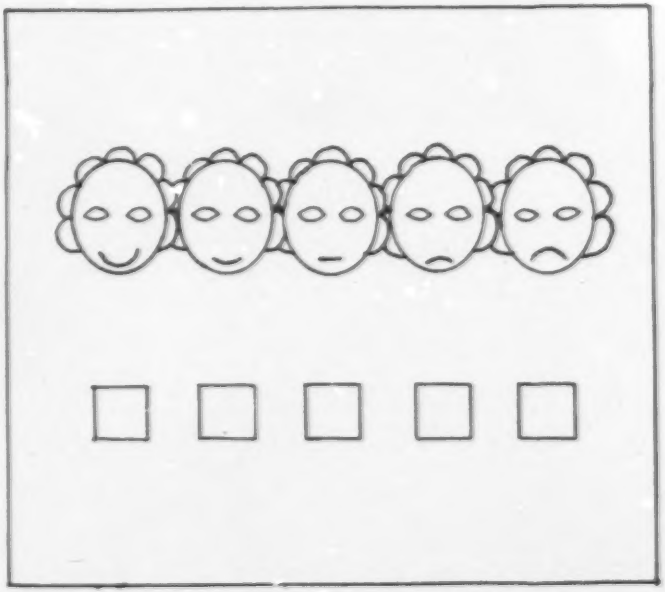
Janet is coming up the walk toward school.



She sees some children in her class.

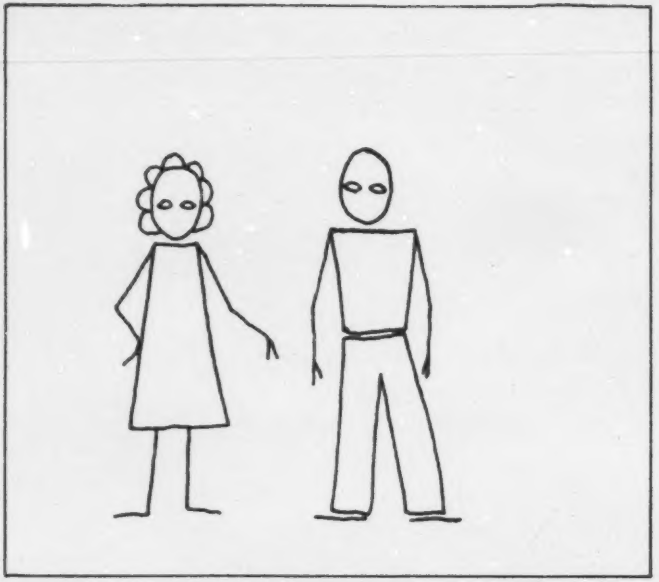


Janet sees them looking at her.

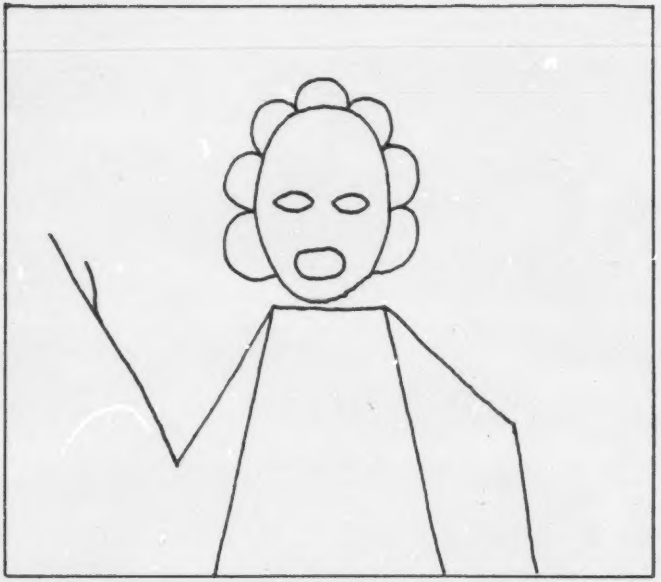


Which one is Janet's face?

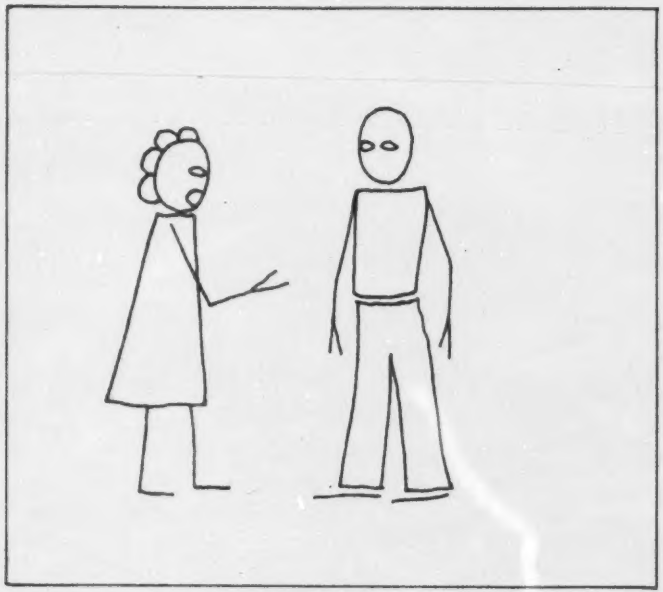
S-19



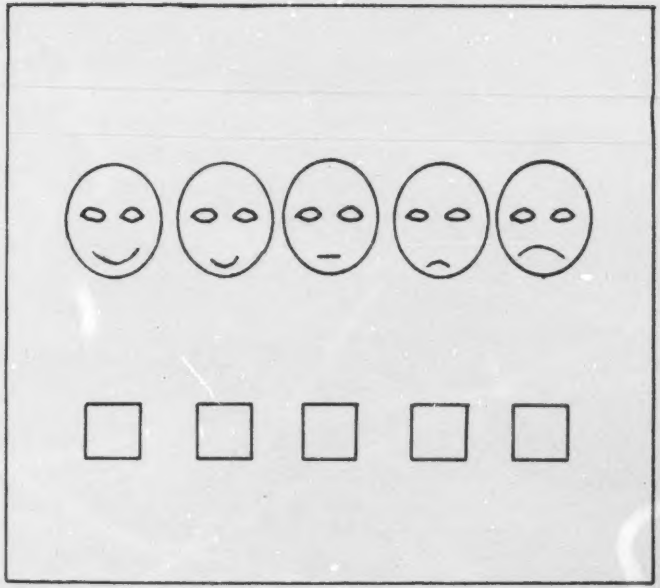
Jean is visiting Dave.



She says,"I go to a nice school."

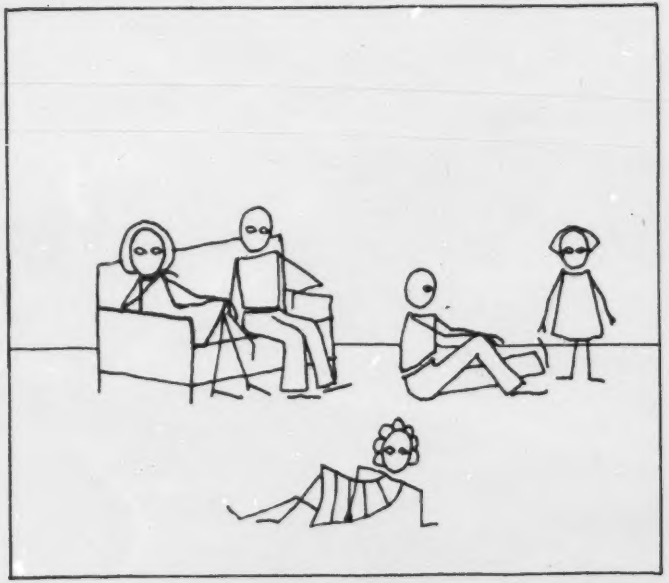


She says, "How do you like your school, Dave?"

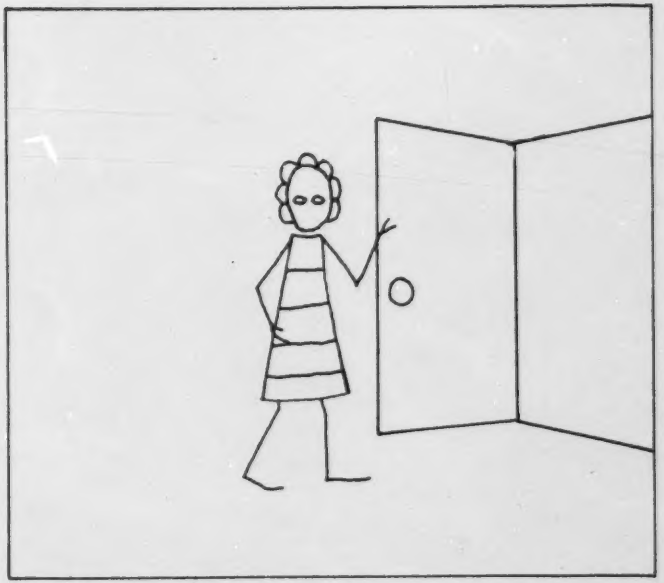


Which one is Dave's face?

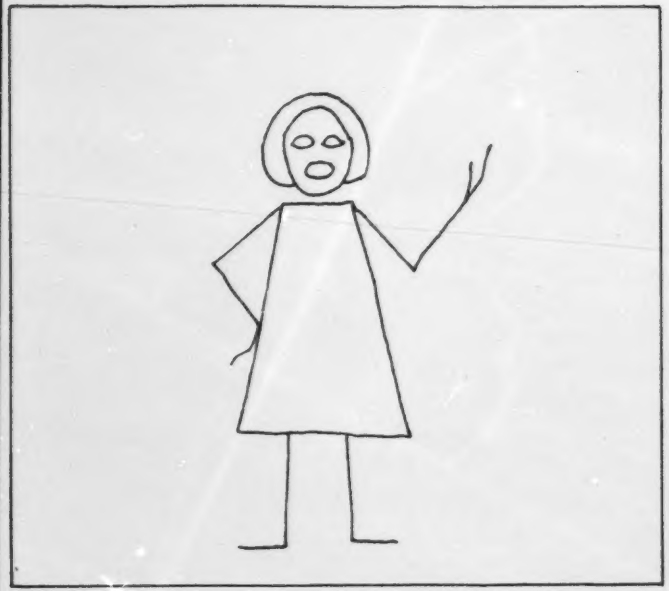
H-20



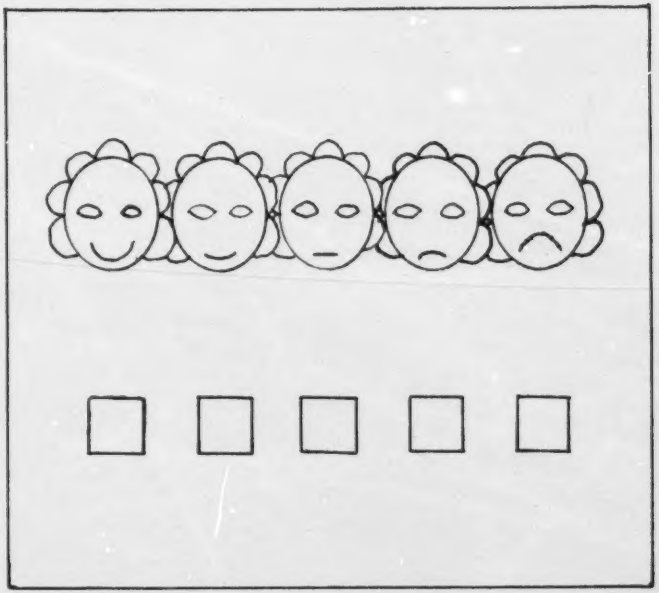
Molly is at home with her mother and father, her brother and her sister.



She starts to leave the room.

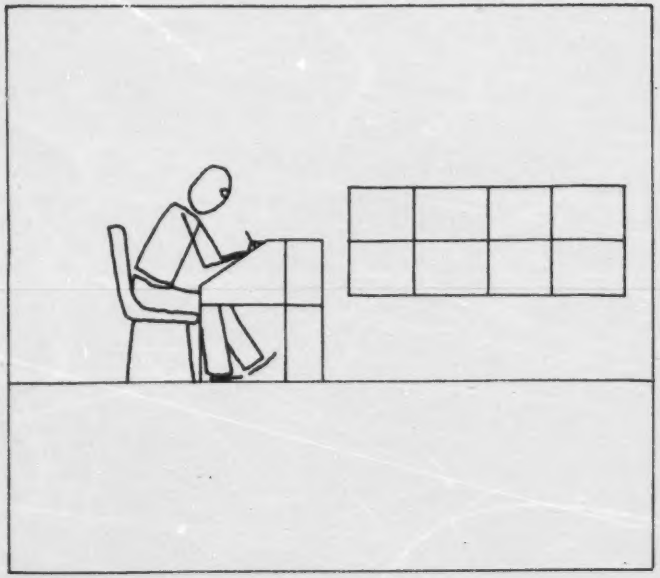


Mother says, "Stay here Molly, our whole family is together."

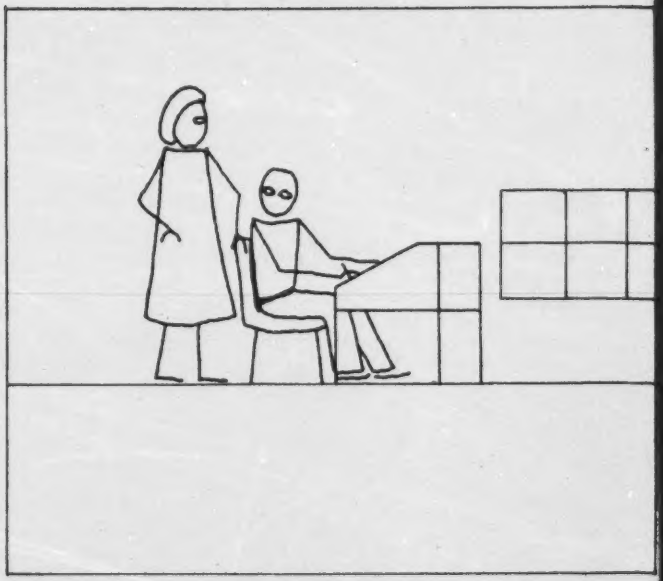


Which one is Molly's face?

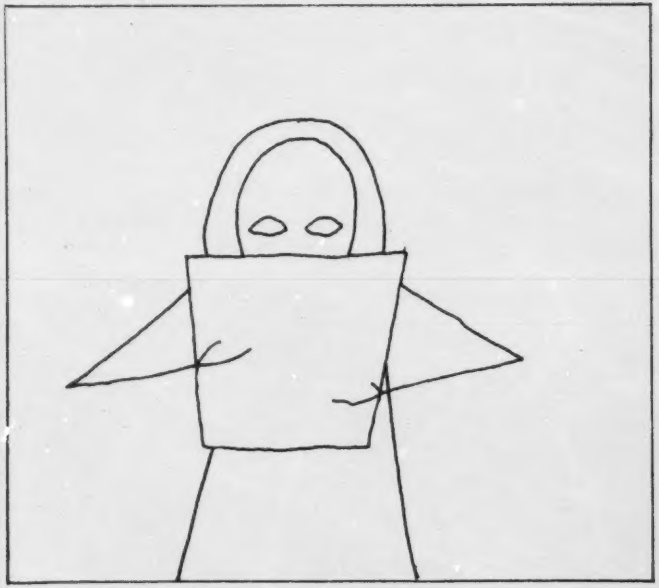
S-21



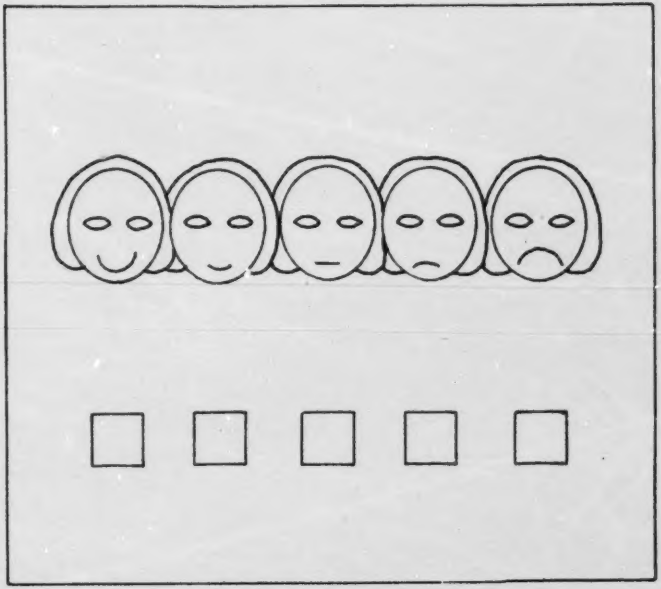
Mark is working at school.



Mark's teacher comes over.

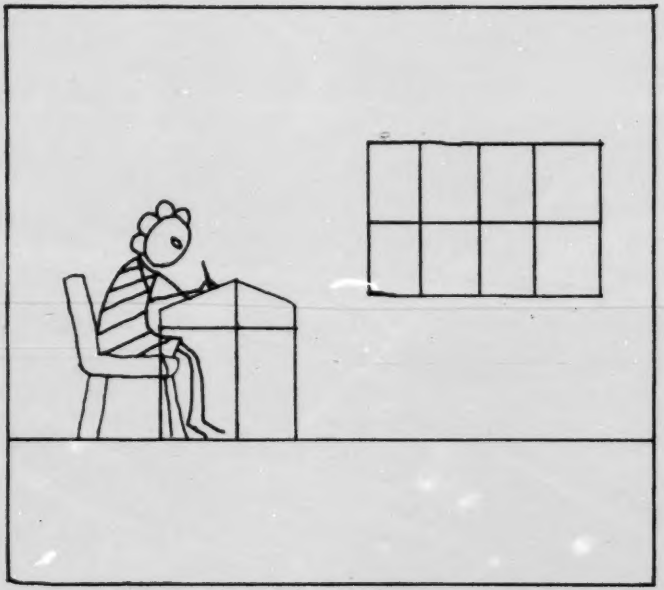


She looks at Mark's work.

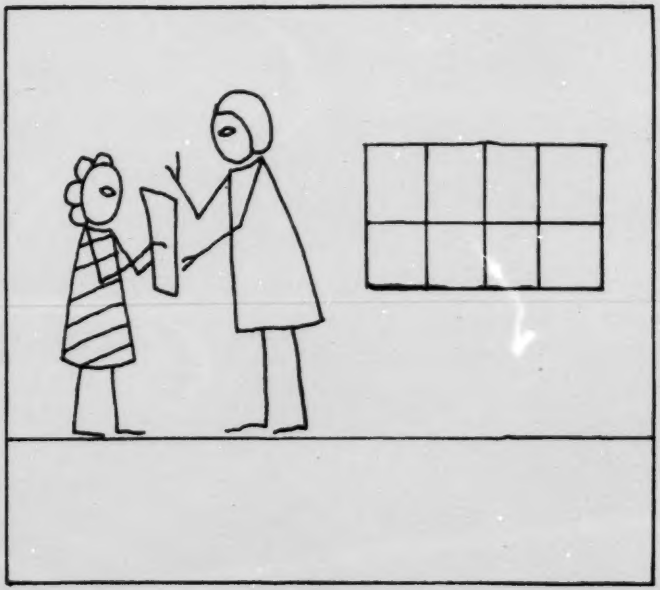


Which one is the teacher's face?

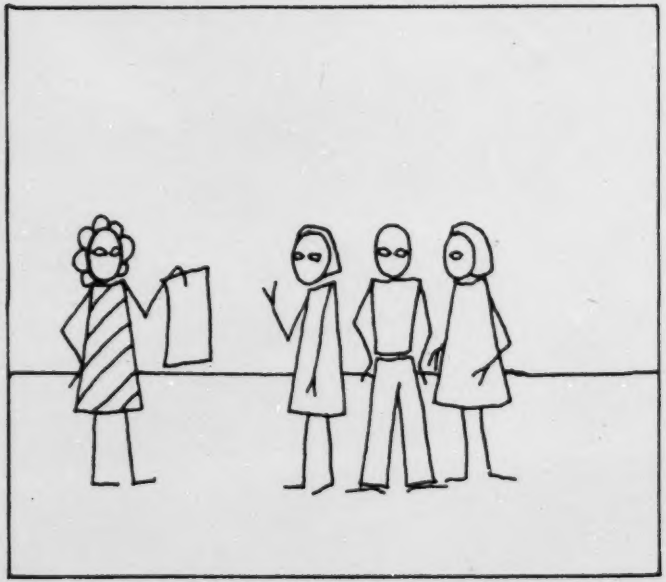
P-22



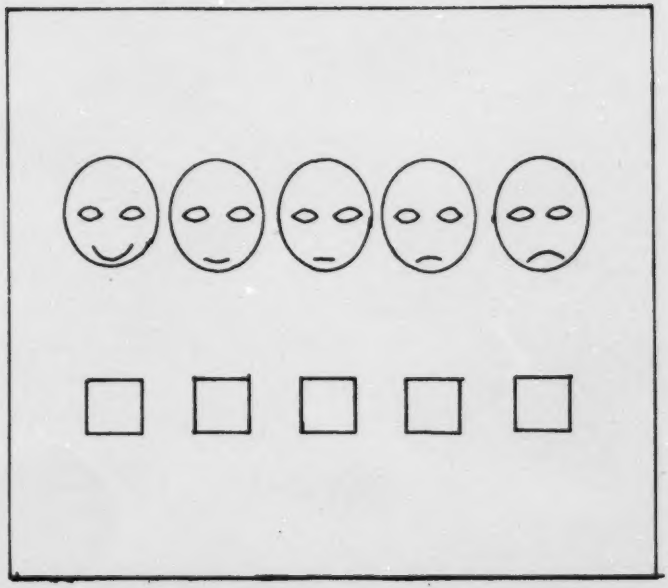
Alice has made a picture at school.



The teacher tells Alice it is a good picture.

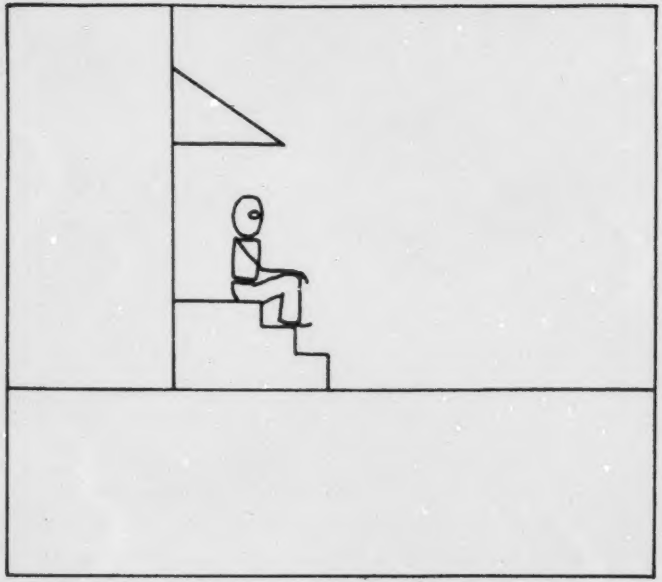


Alice shows it to the other children after school.

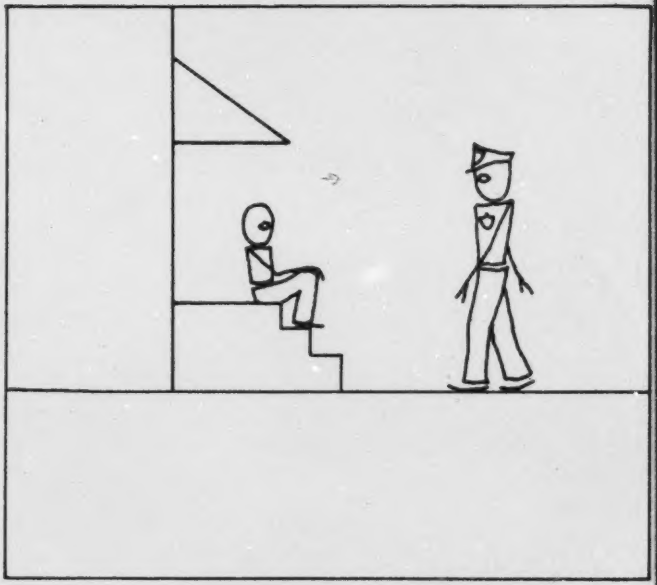


How do their faces look?

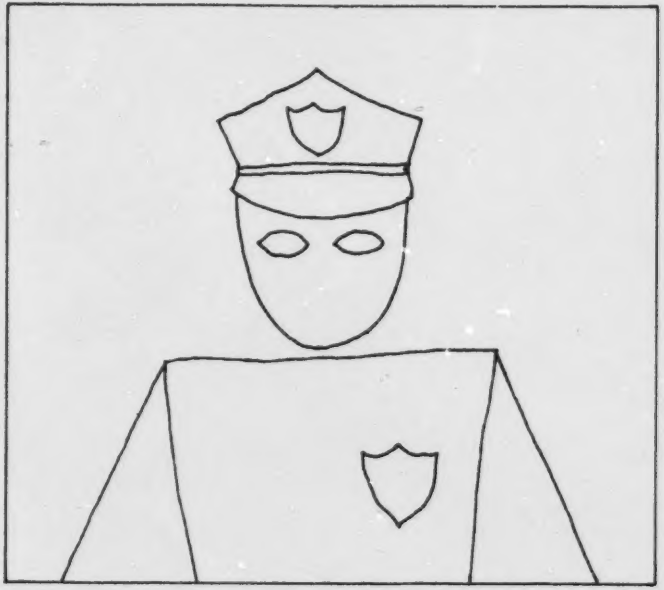
C-23



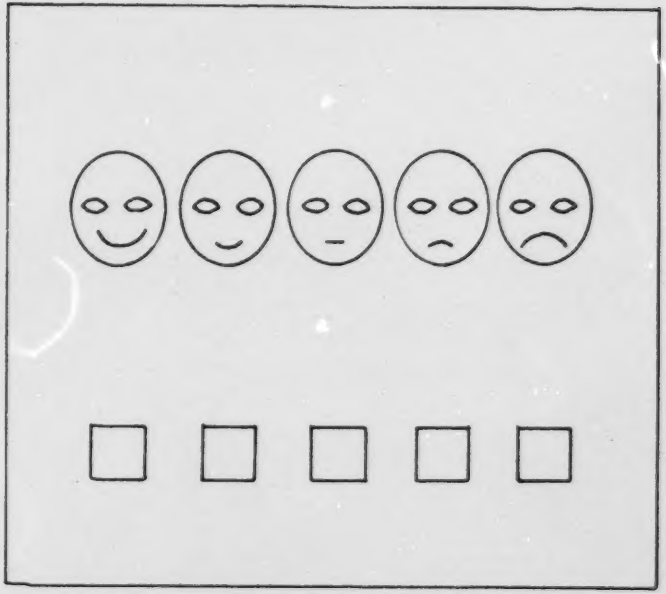
Max is sitting on his steps.



He sees a policeman walking up to him.

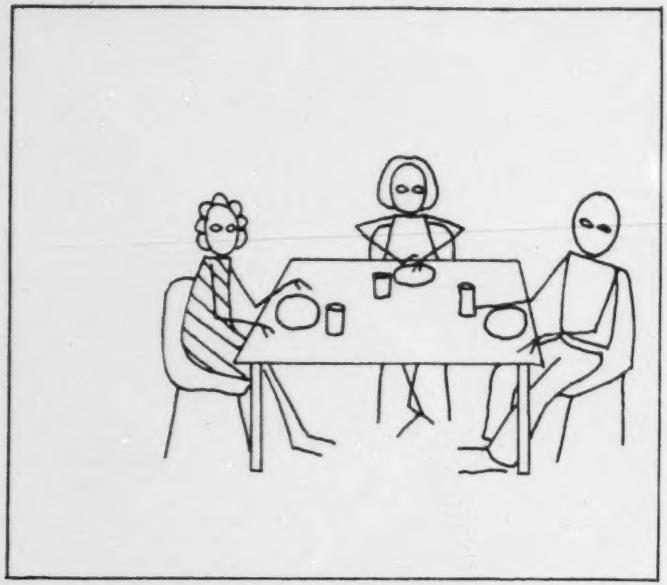


The policeman looks at Max.

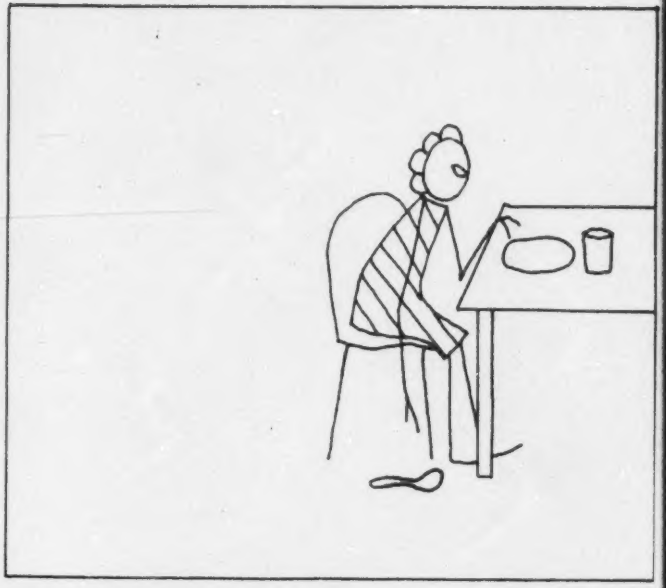


Which one is Max's face?

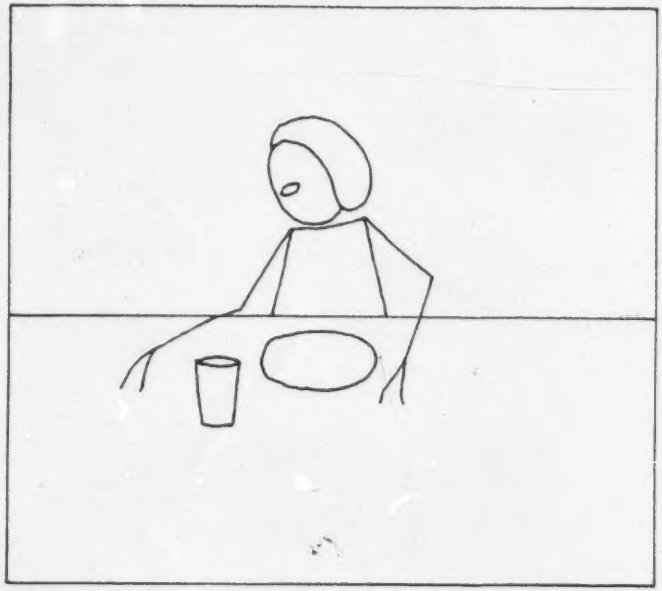
H-24



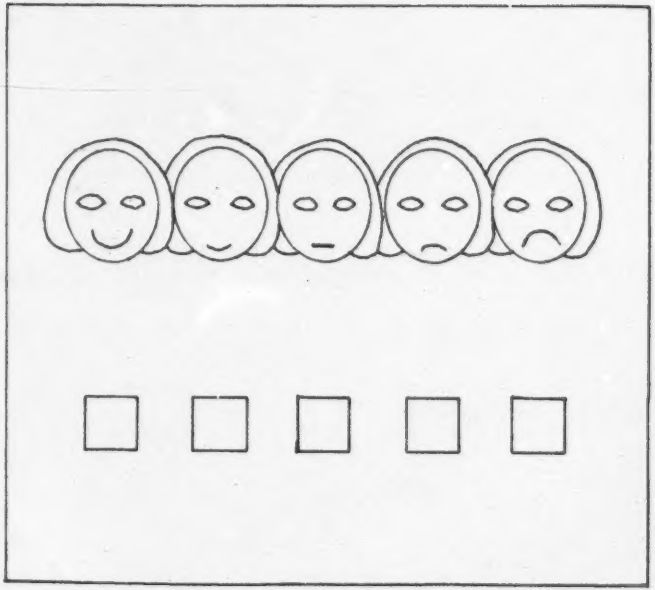
Betty drops her spoon at the table.



She starts to pick it up.

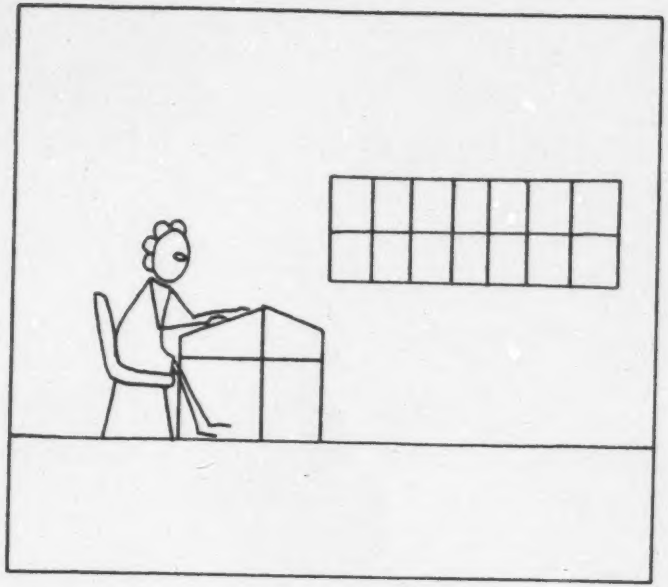


She sees her mother looking at her.

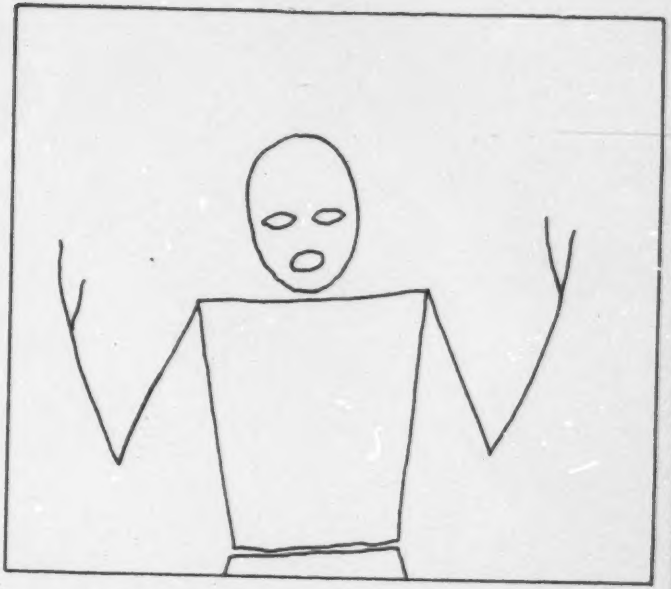


Which one is her mother's face?

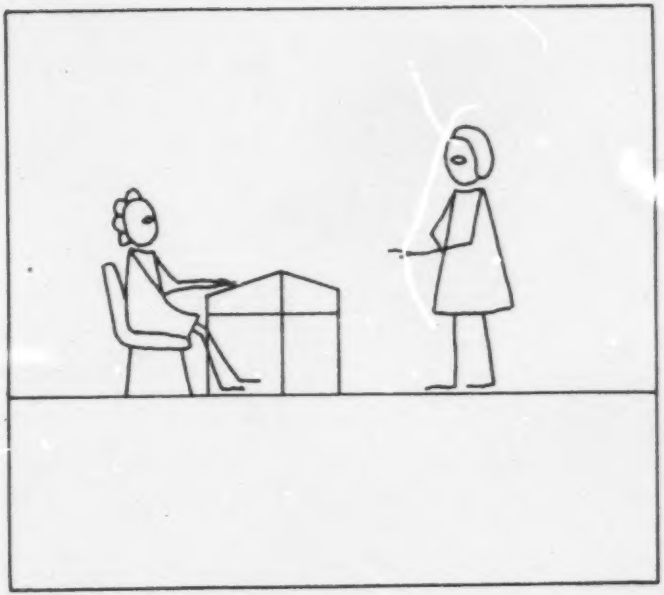
S-25



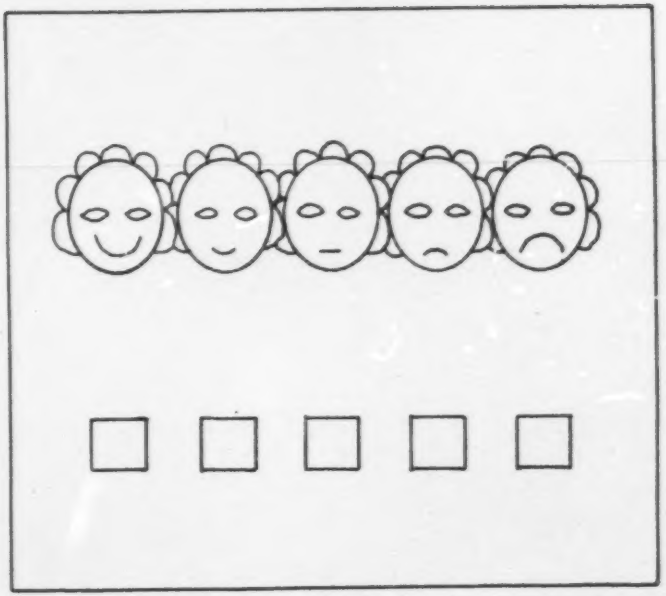
Julie is in school.



Each child is telling about something he did.

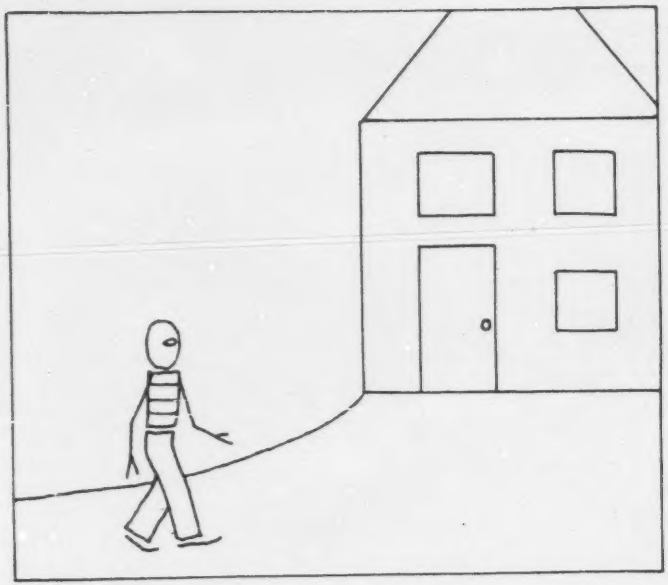


The teacher calls on Julie.

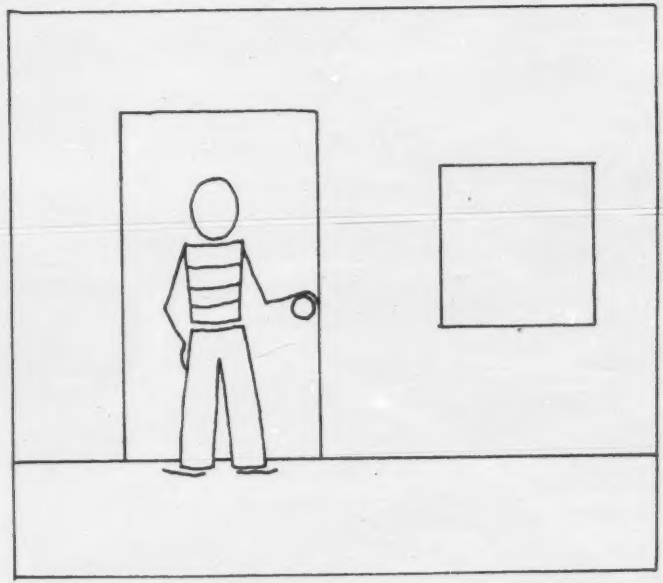


Which one is Julie's face?

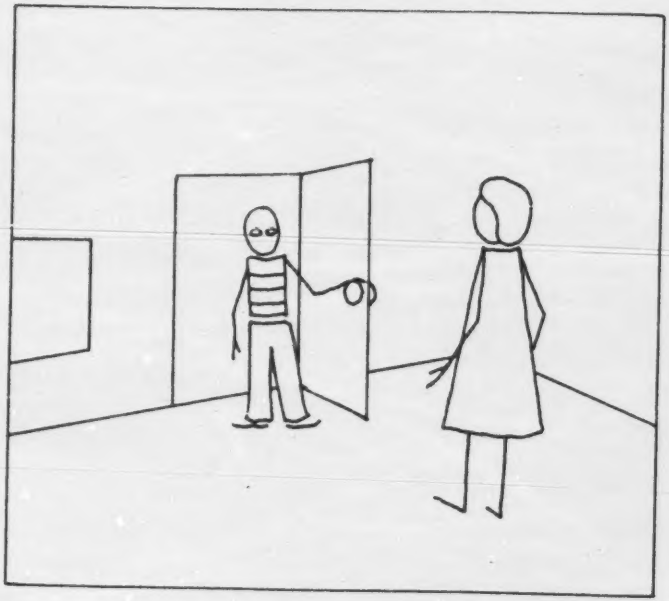
H-26



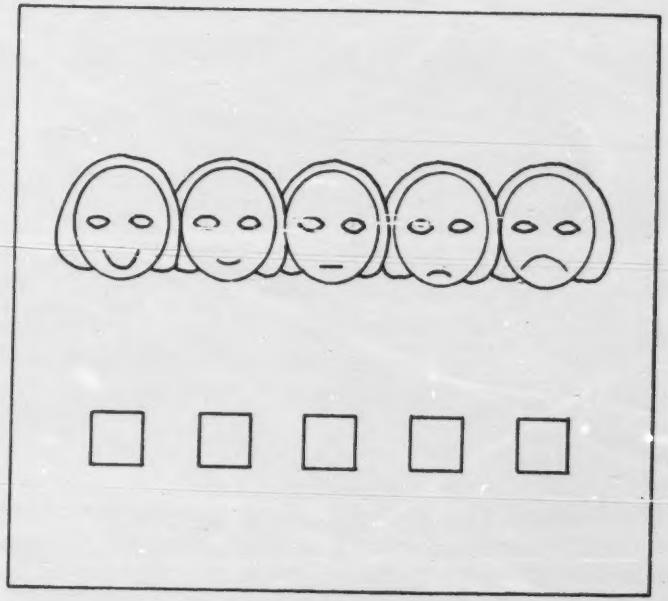
Phil is coming home.



He opens the door.

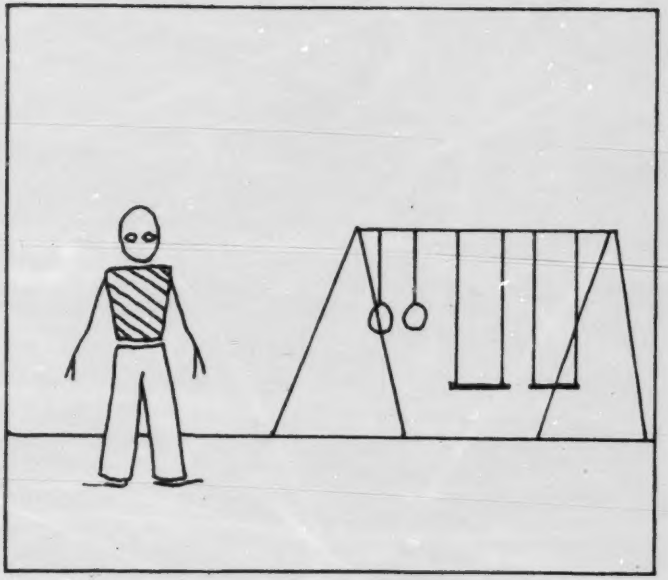


His mother sees him come in.

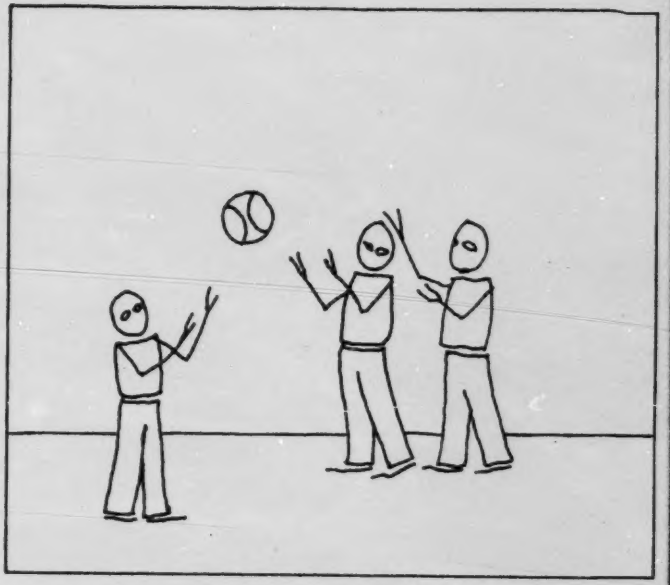


Which one is his mother's face?

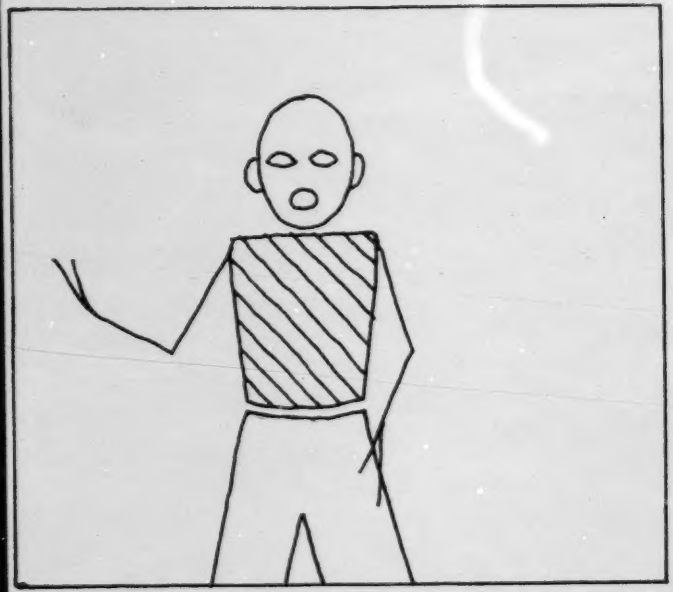
P-27



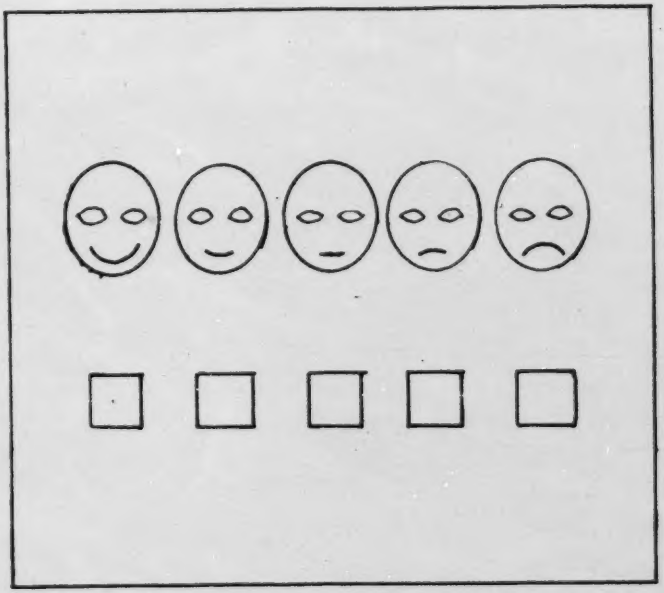
John is on the playground.



He sees a group of children playing a game.



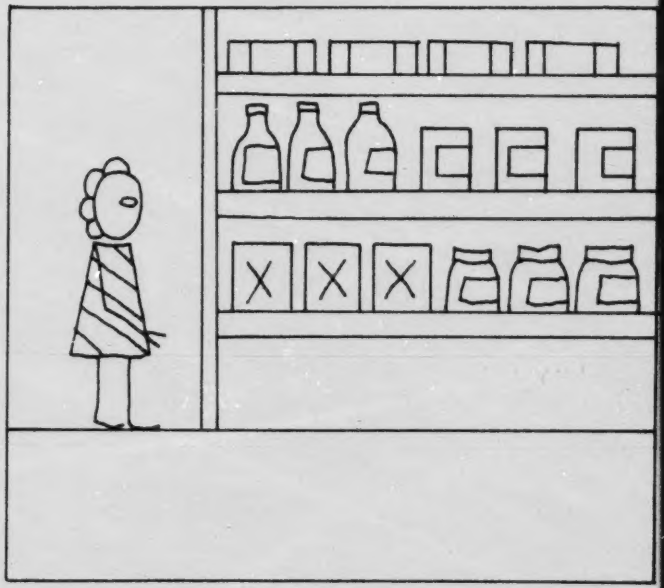
John asks the boys if he can play with them.



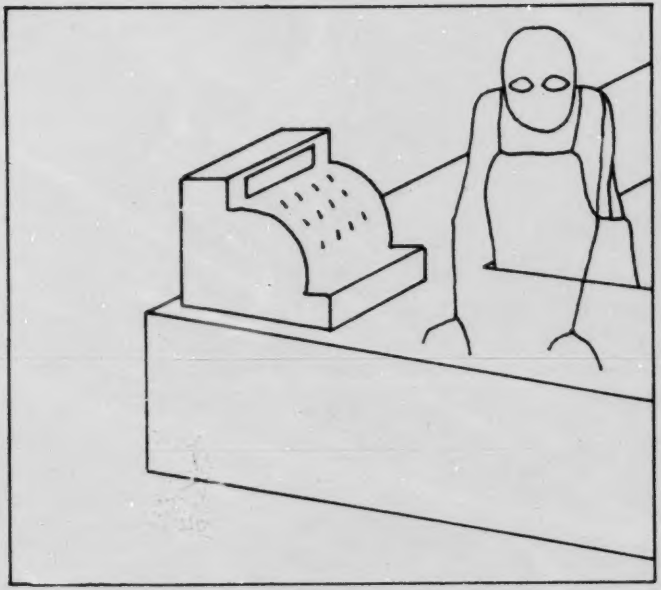
How do the boys look?

C-28

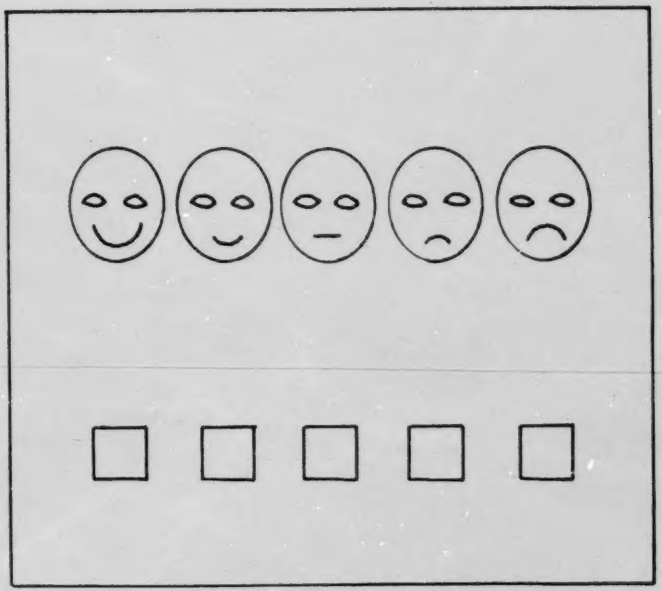
Sue goes to the store with her mother.



Sue looks at things while mother shops.

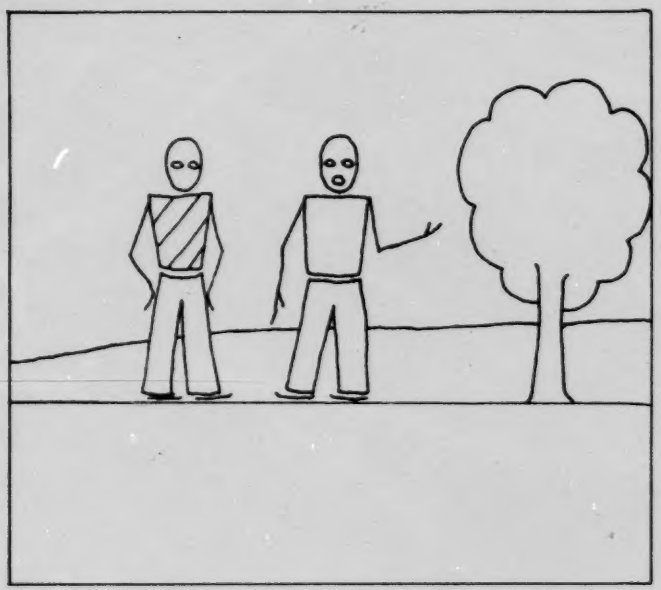


The store-man sees Sue.

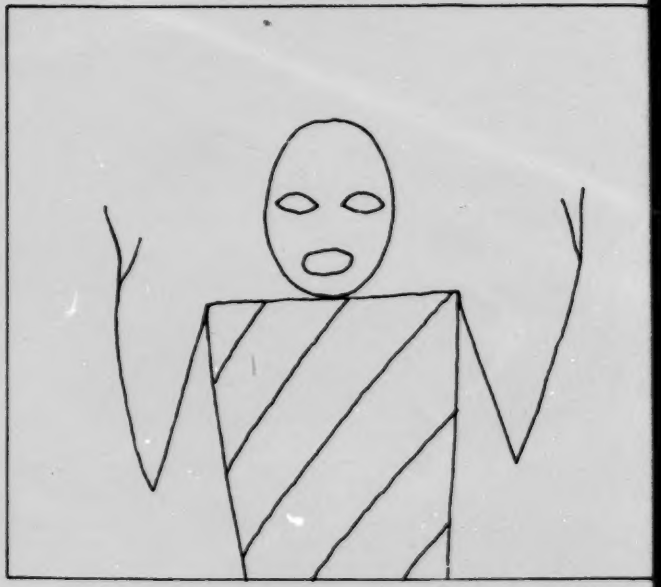


Which face is the store-man's?

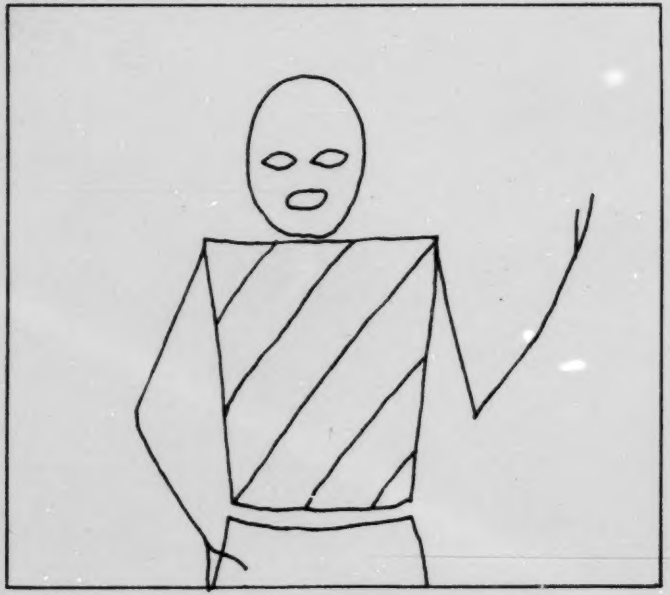
H-29



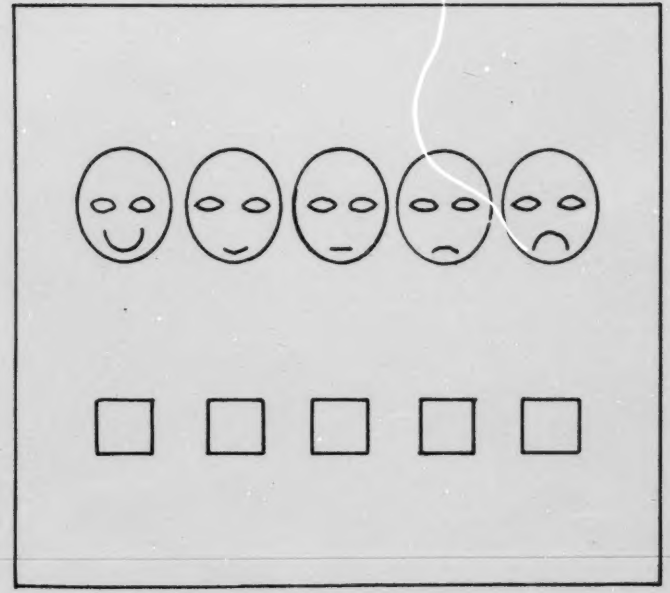
Tom wants to go to Bill's house to play.



Bill says,"No. My folks are always mean!"

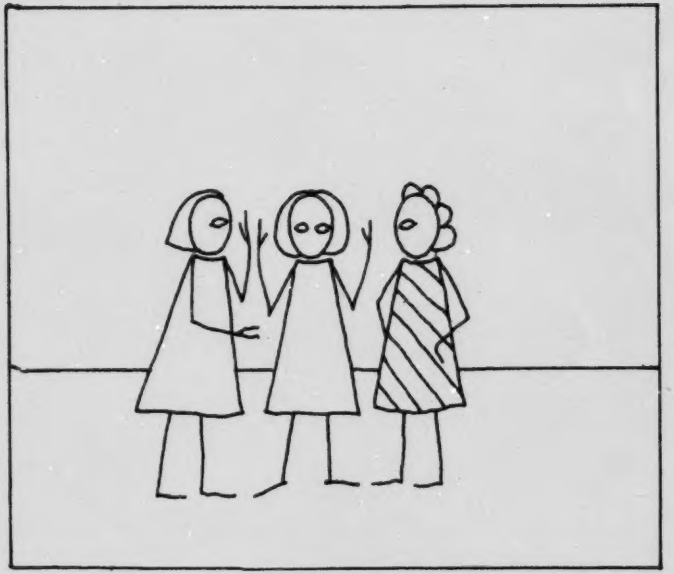


Bill says, "Let's go to your house, Tom!"

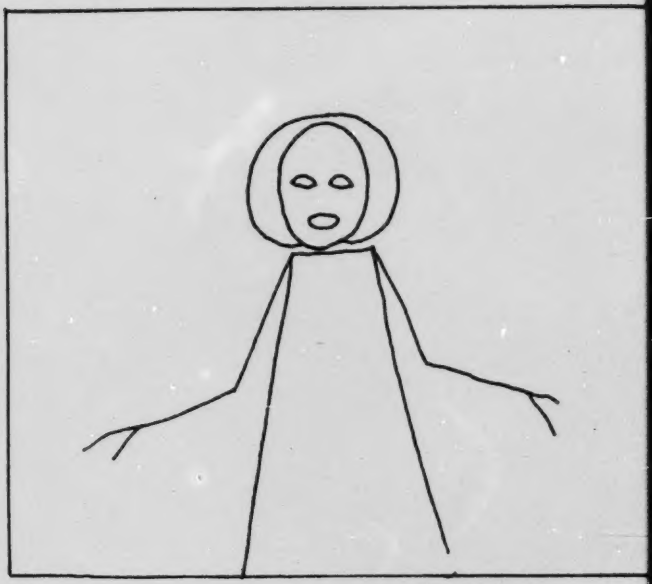


Which one is Tom's face?

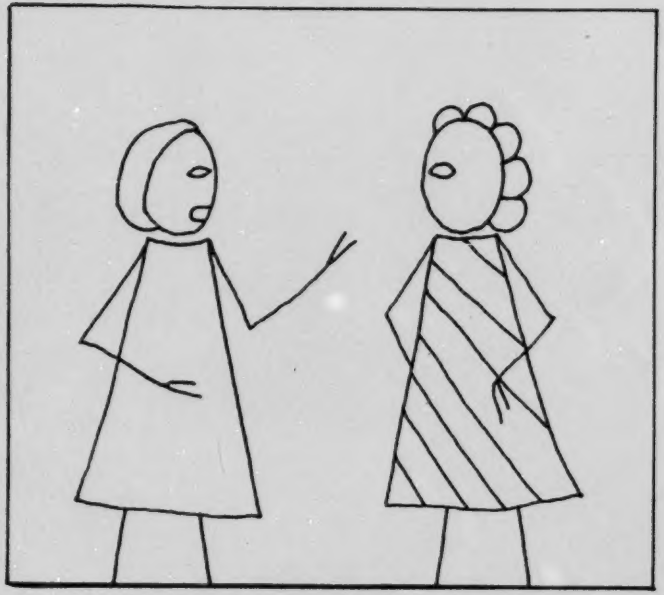
P-30



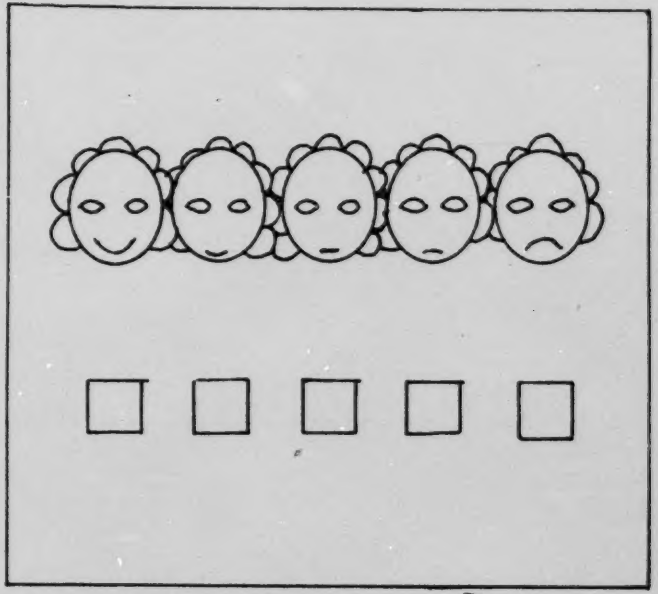
Peggy is in a club with some other girls.



One of the girls says,"We need more kids for our club."

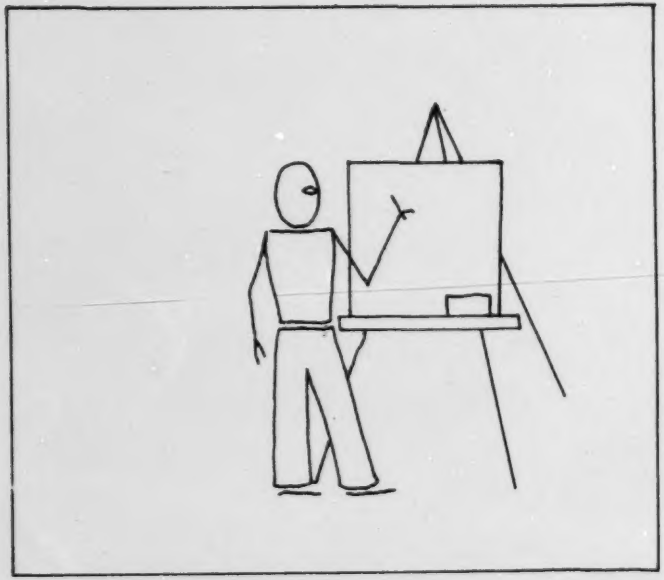


She says, Peggy, do you want more girls in our club?

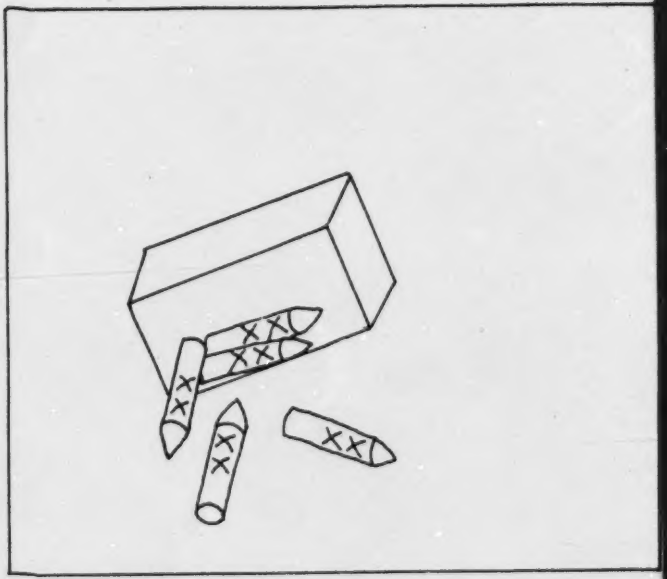


Which one is Peggy's face?

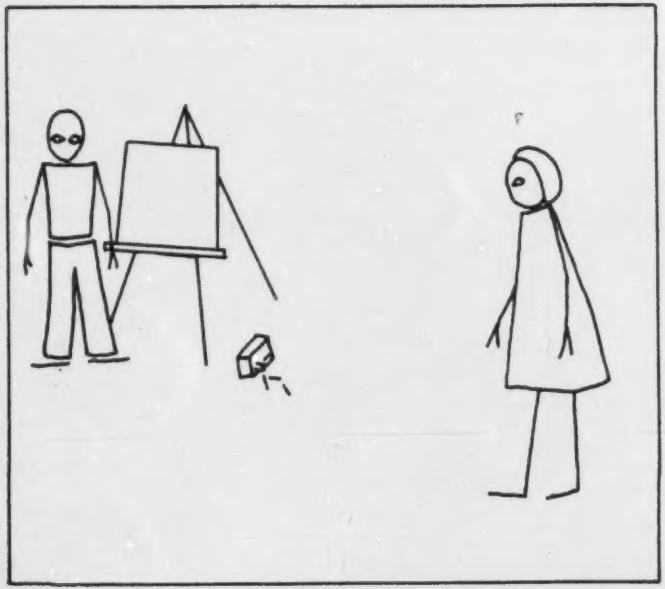
S-31



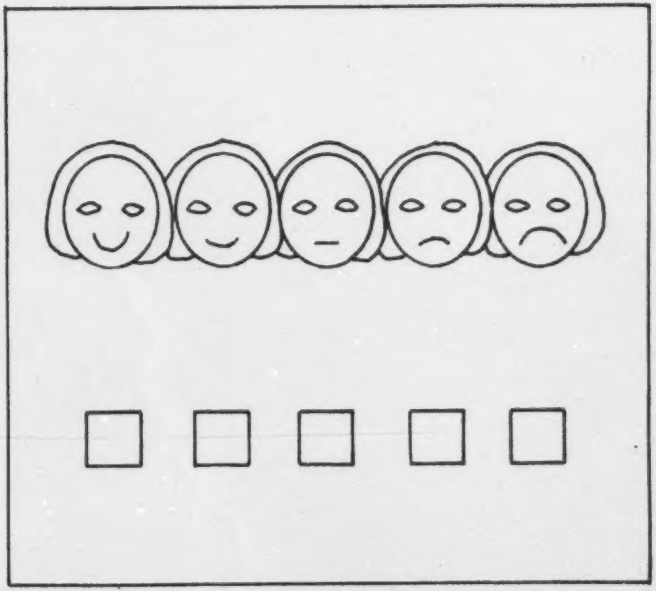
Ray is drawing at school.



He spills his crayons on the floor.

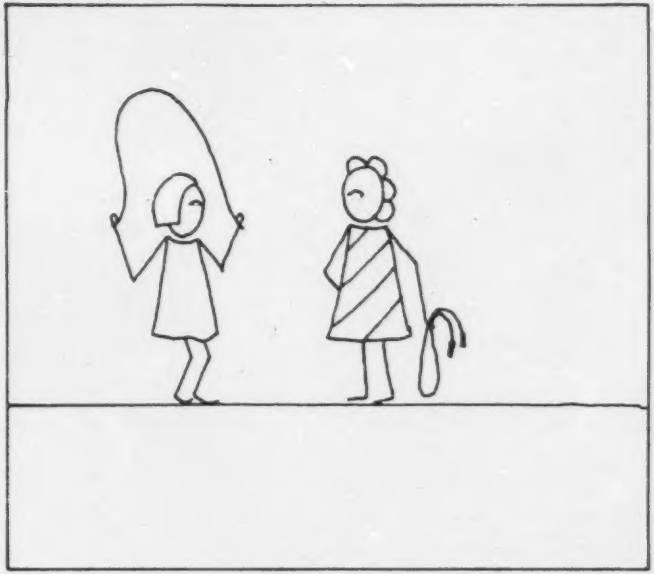


He sees the teacher coming over...



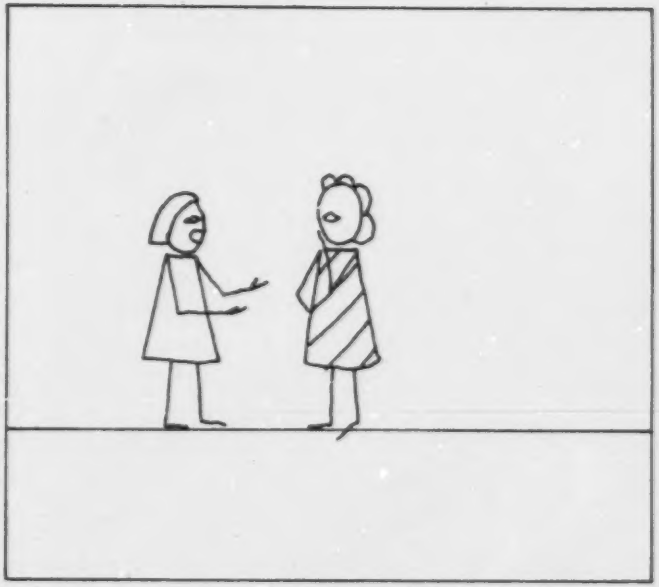
Which one is the teacher's face?

C-32

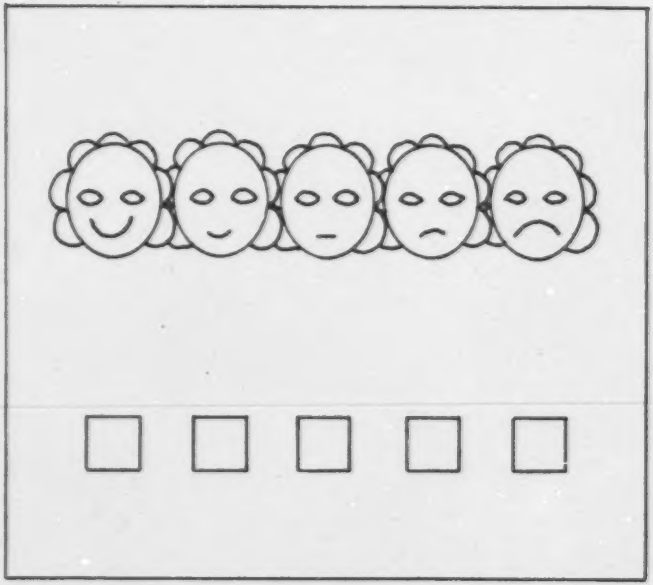


Rita is playing with Nancy at school.

Rita says, "I don't like the street where I live. Everything is so ugly".

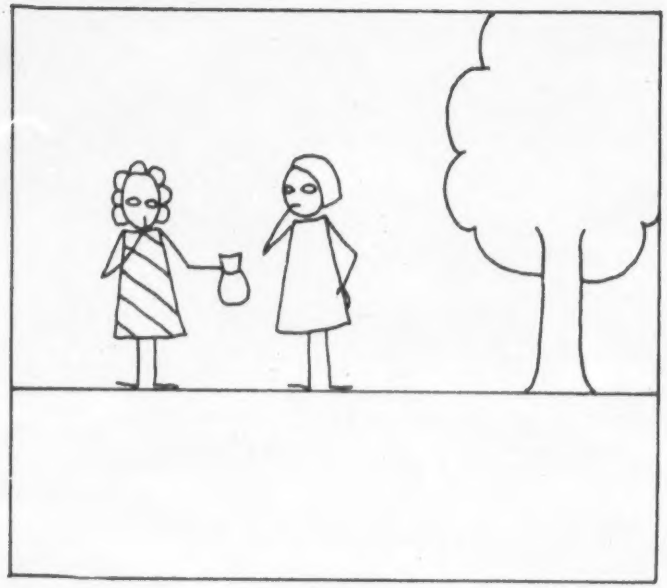


She says,"Do you like your street, Nancy?"

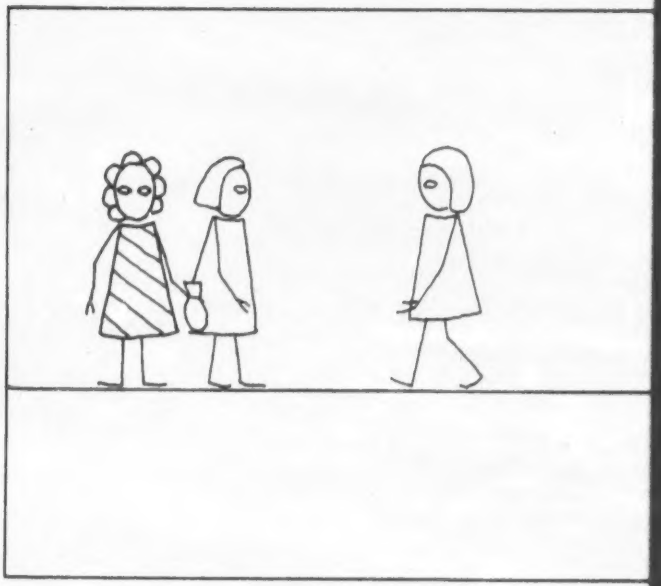


Which one is Nancy's face?

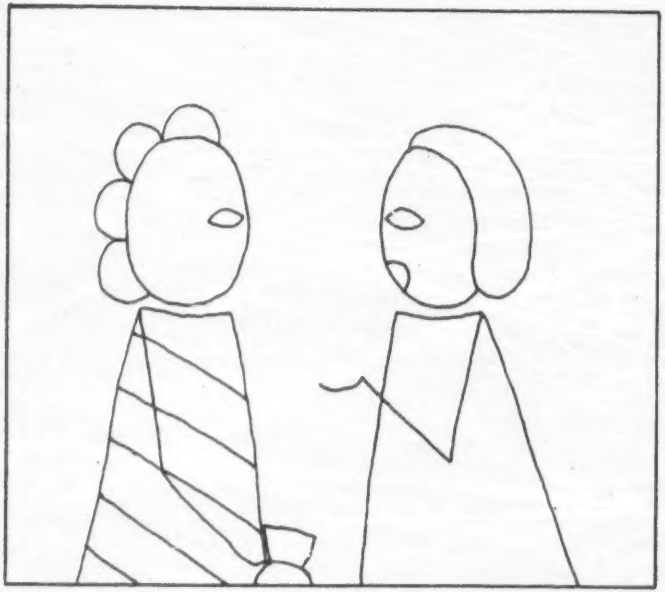
P-33



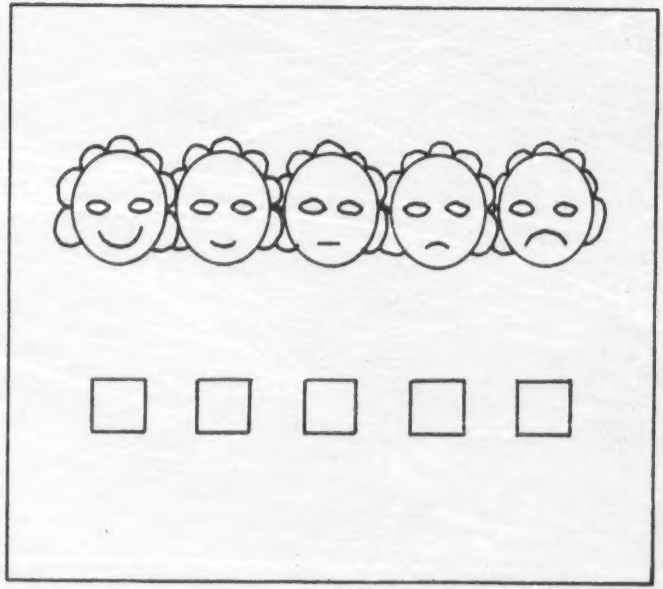
Carol and Lucy have some candy.



Another girl comes up.

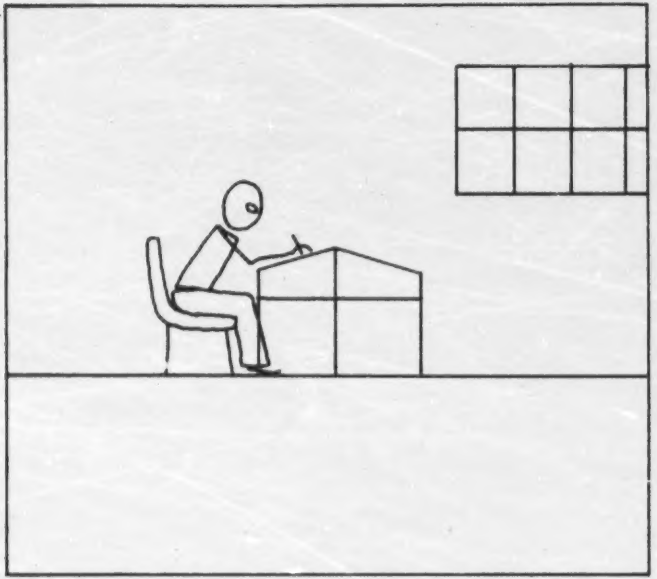


She asks Carol for some candy.

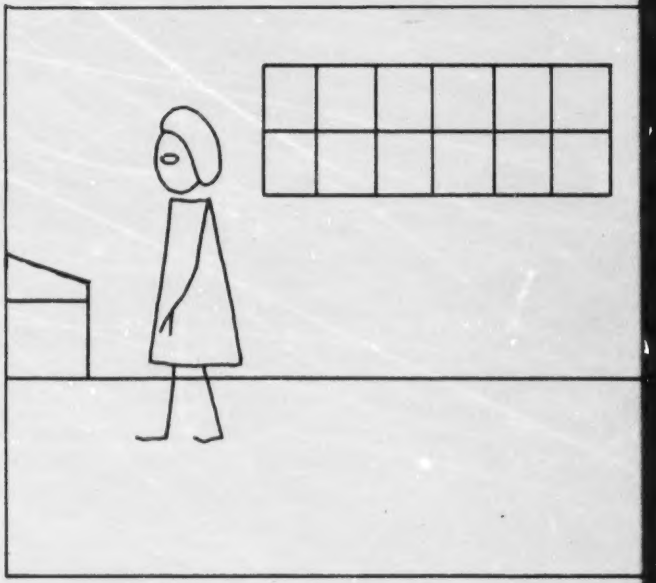


Which one is Carol's face?

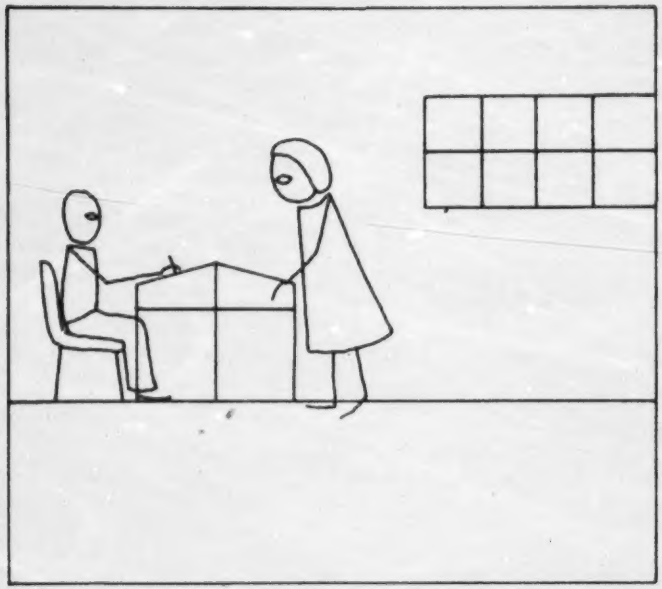
S-34



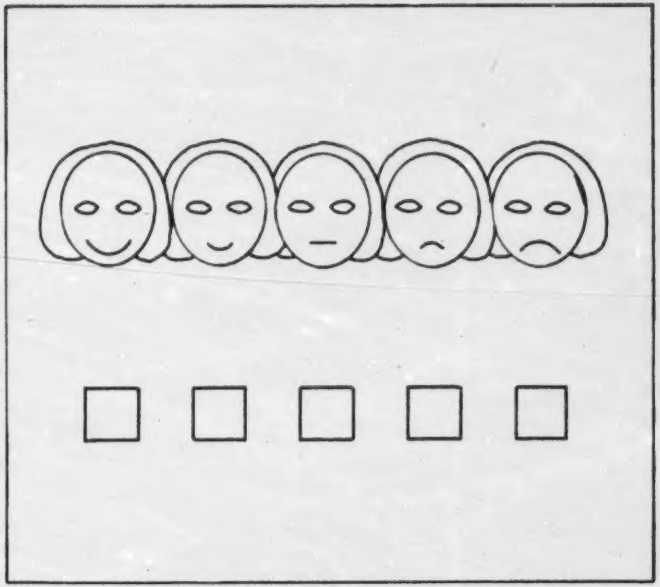
Jeff and his class are working ar school.



The teacher is walking around the room.

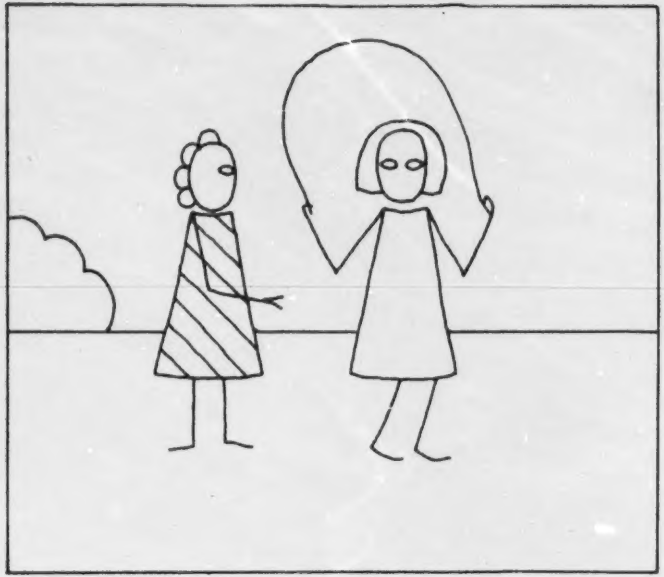


She stops at Jeff's desk.

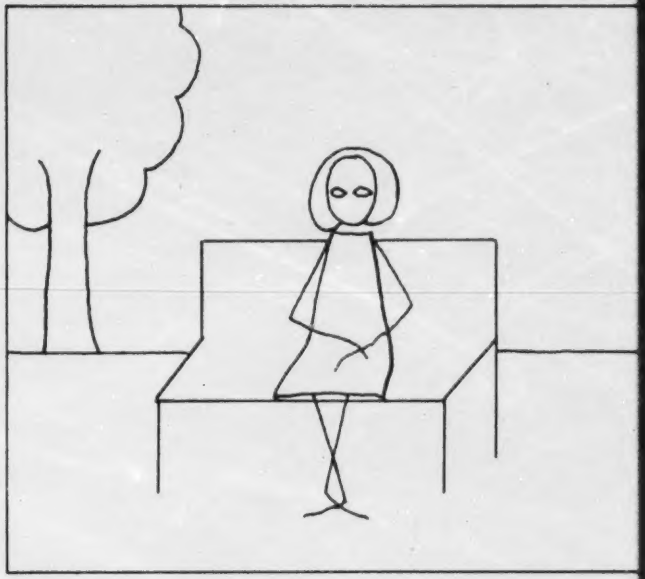


Which one is the teacher's face?

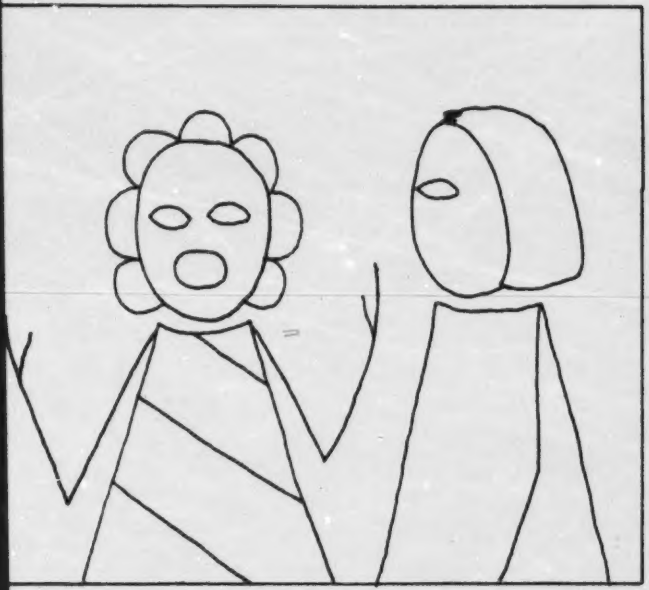
C-35



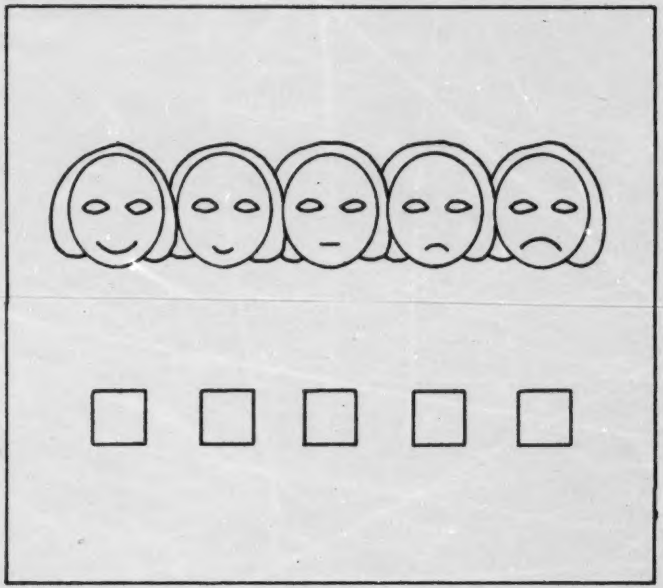
Barbie and her friend are playing in the park.



A woman is sitting on a park bench.

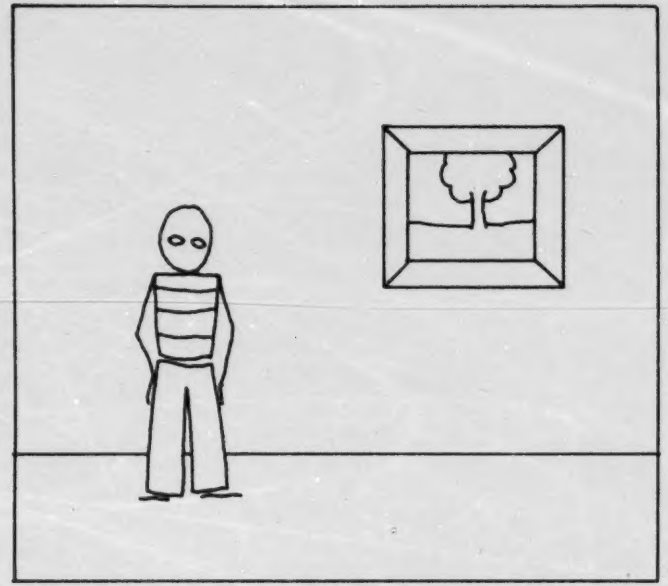


Barbie says,"She's looking at us."

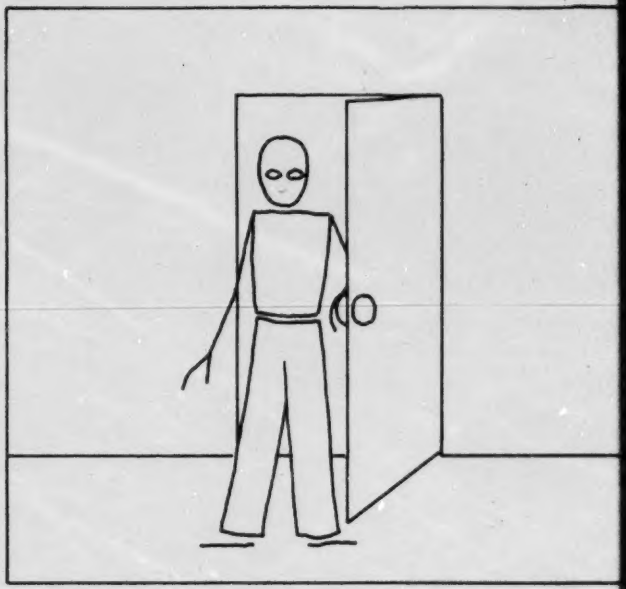


Which one is the woman's face?

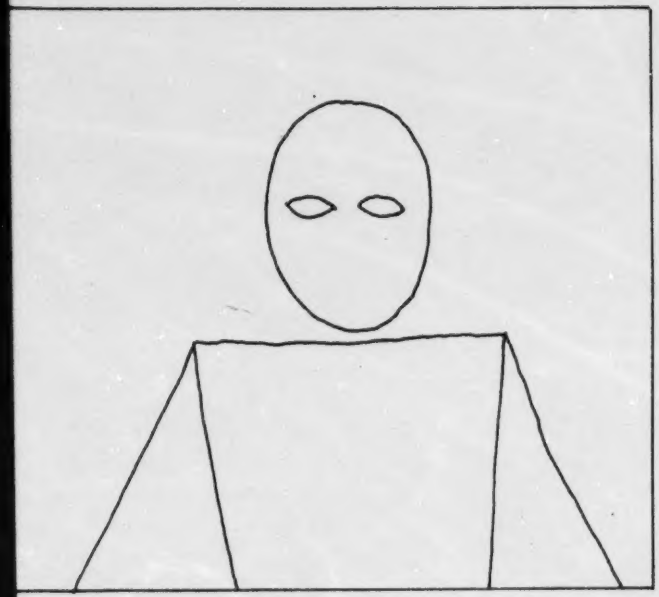
H-36



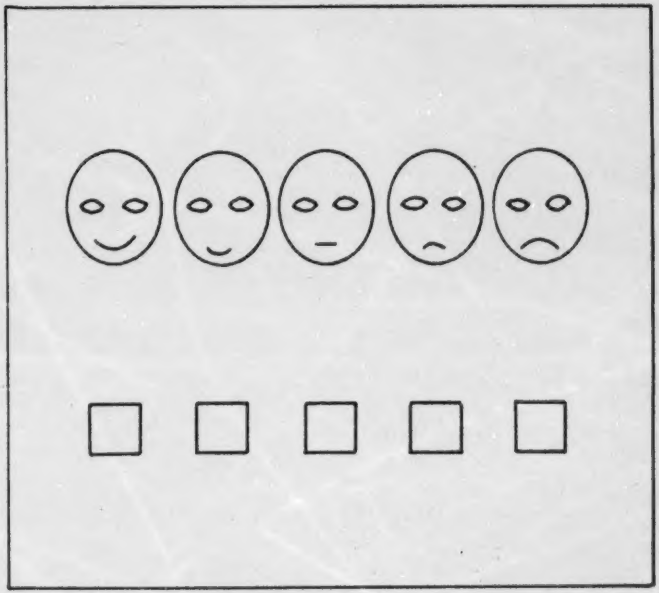
Fred is home.



Dad comes home from work.

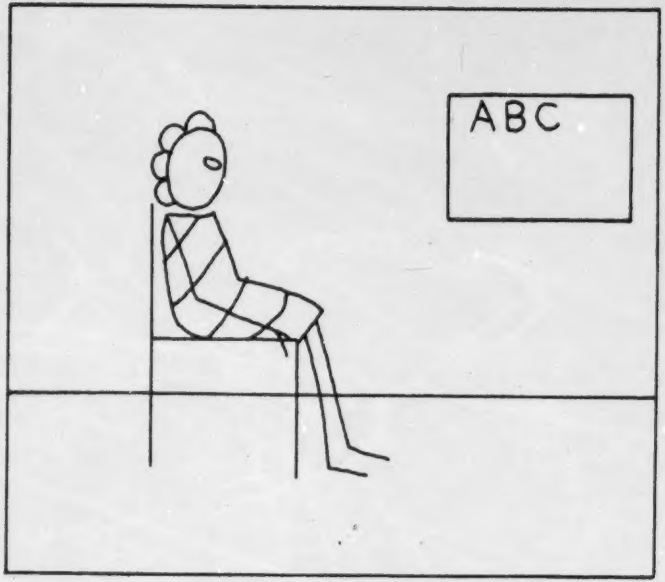


He looks at Fred.

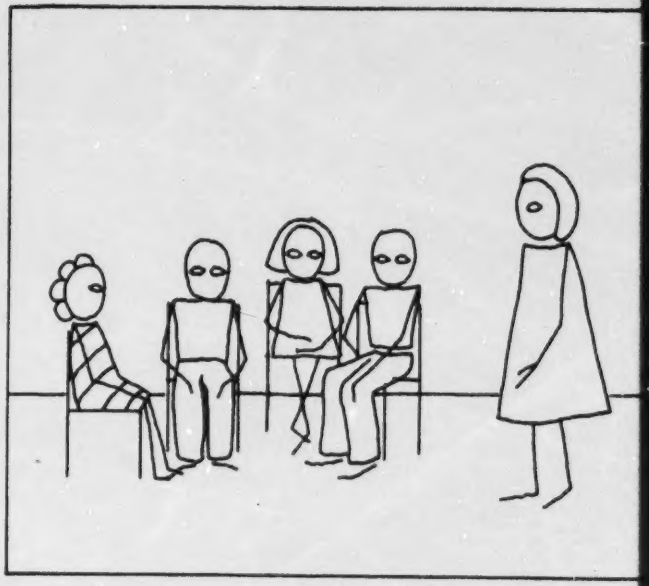


Which one is Fred's face?

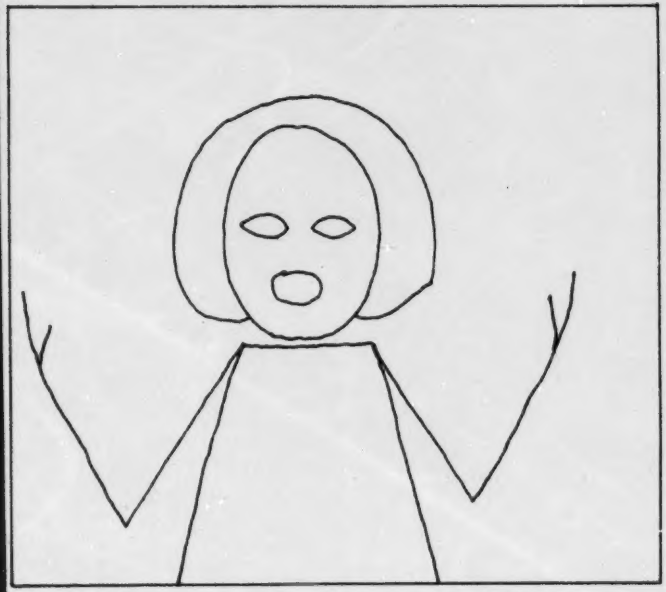
S-37



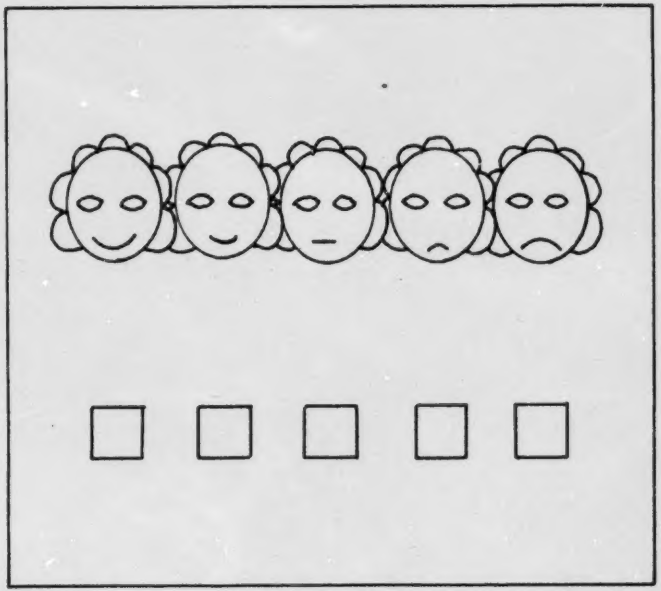
Mary is in school.



The teacher is talking to the class.

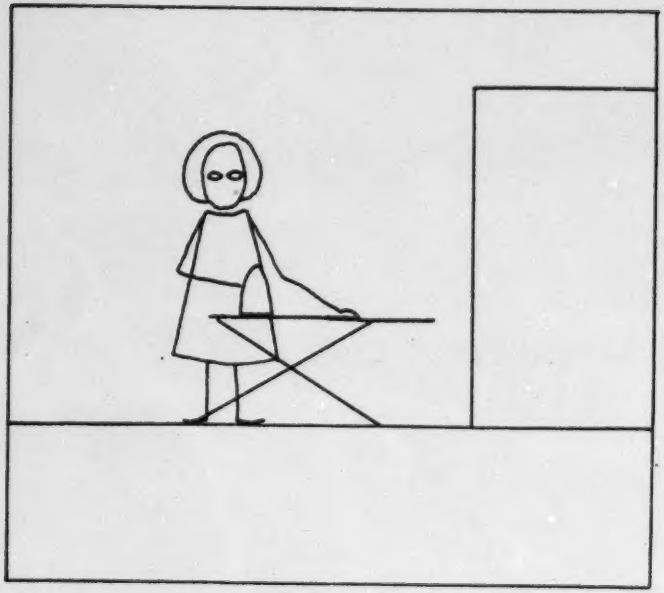


The teacher says, "We will have fun today and work hard too."

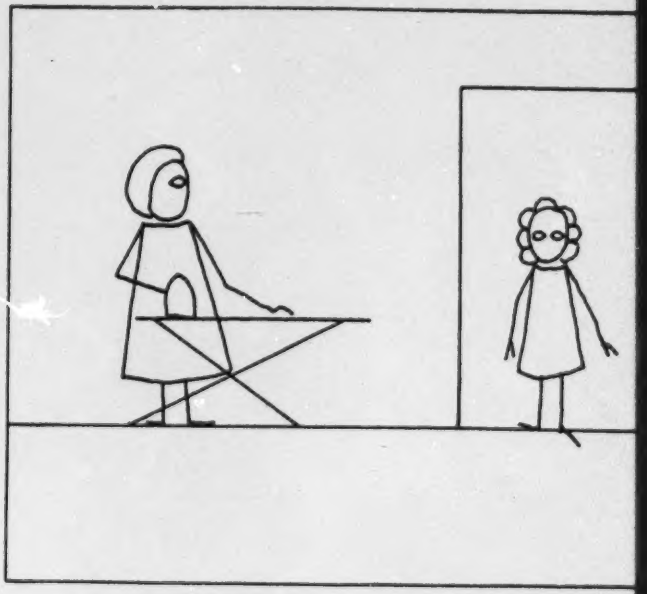


Which face is Mary's?

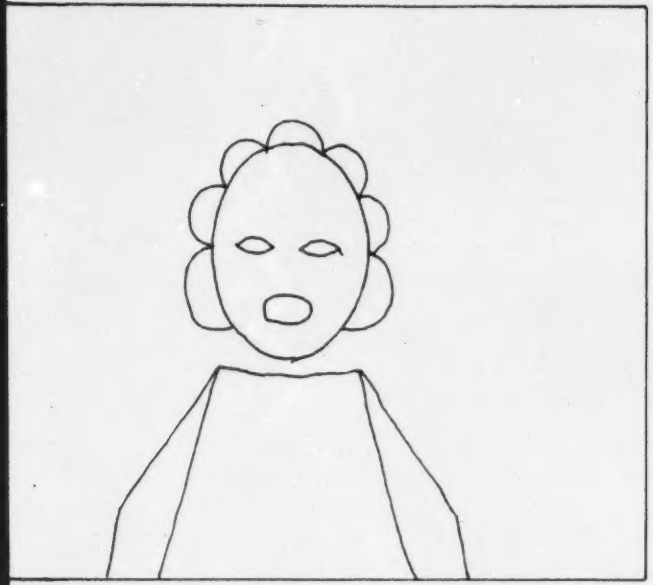
H-38



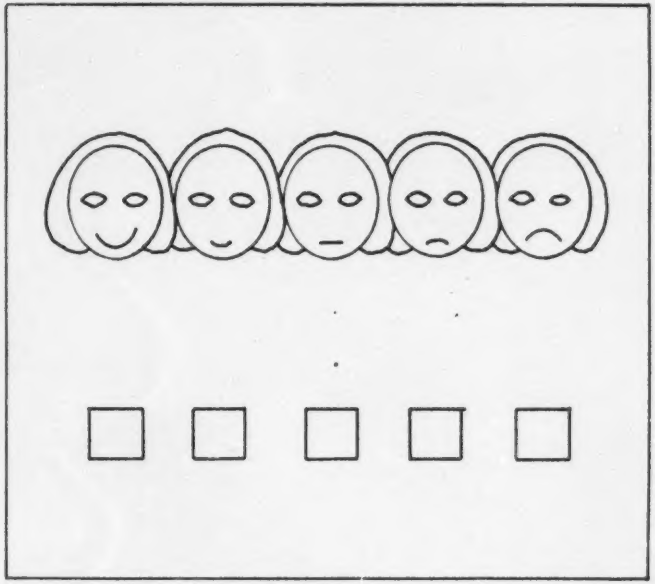
Donna's mother is ironing.



Donna comes into the room.

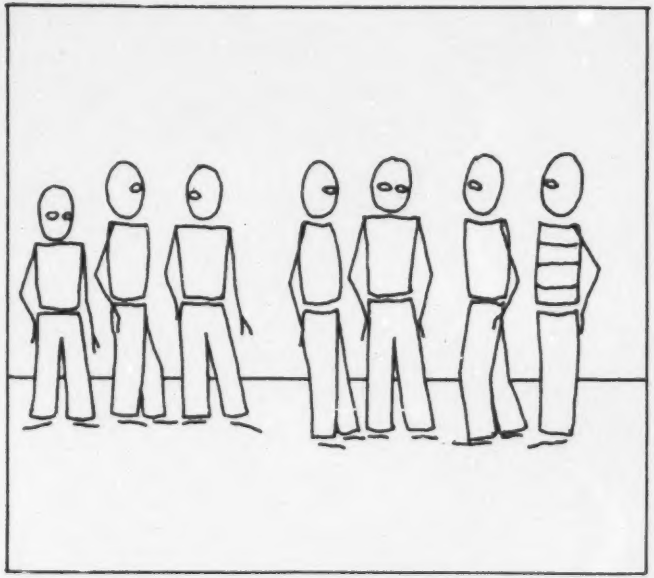


Donna says, "Mother, I want to ask you a question."

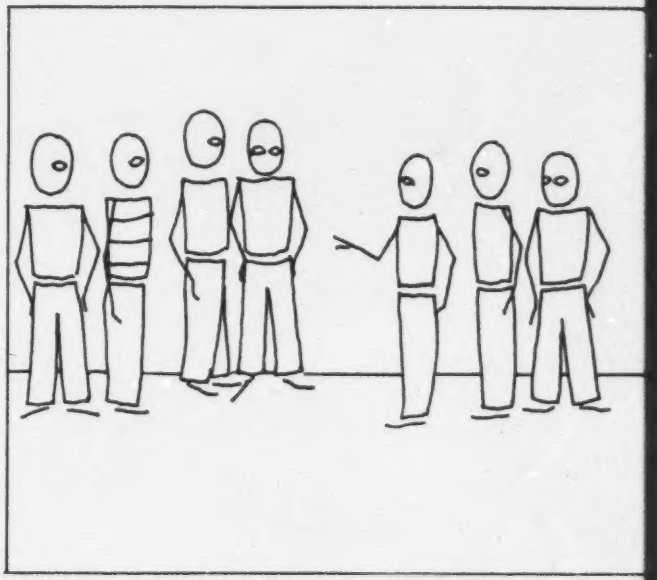


Which one is mother's face?

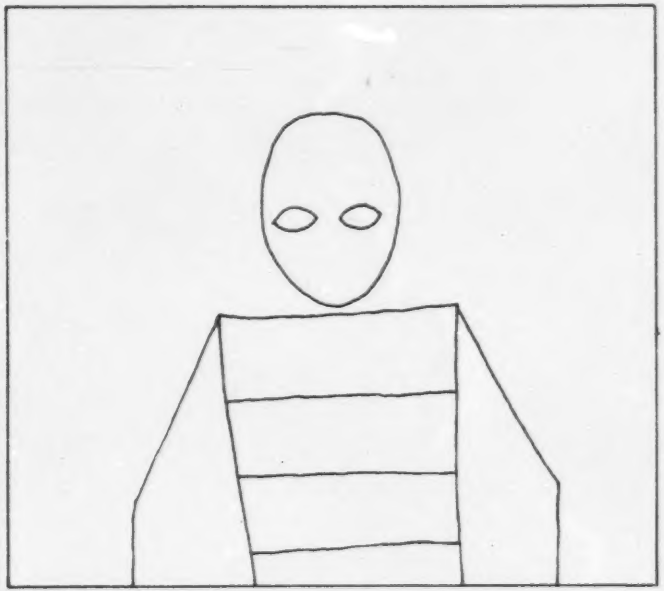
P-39



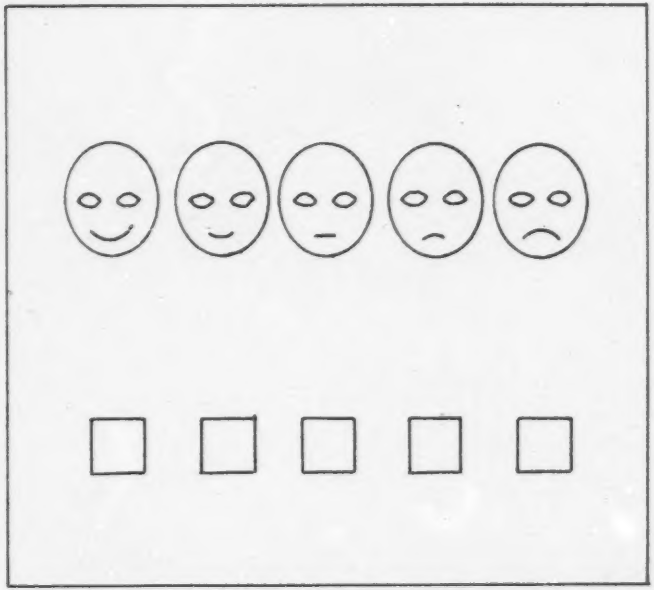
Some boys begin to play a game.



They are choosing sides.

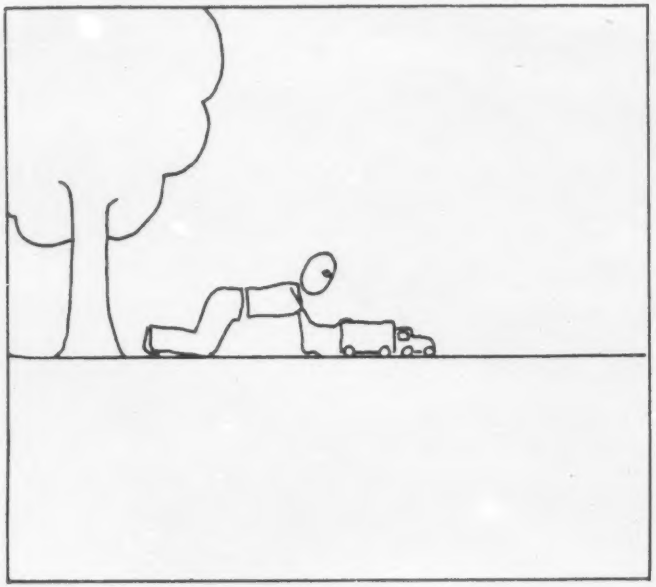


Tim has not been chosen yet.

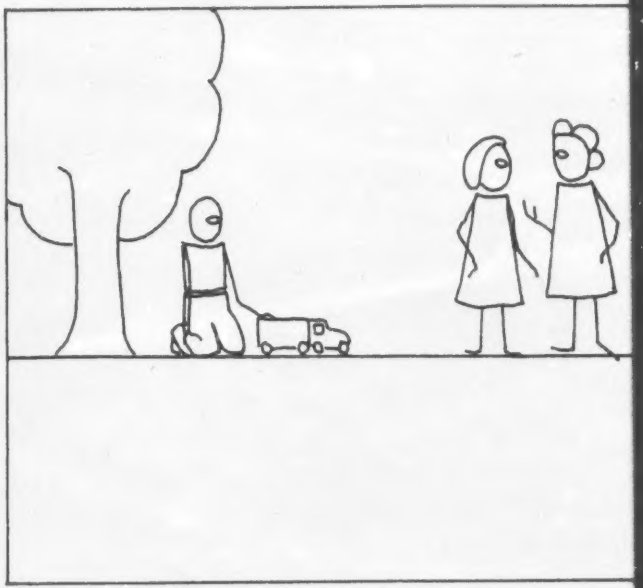


Which one is Tim's face?

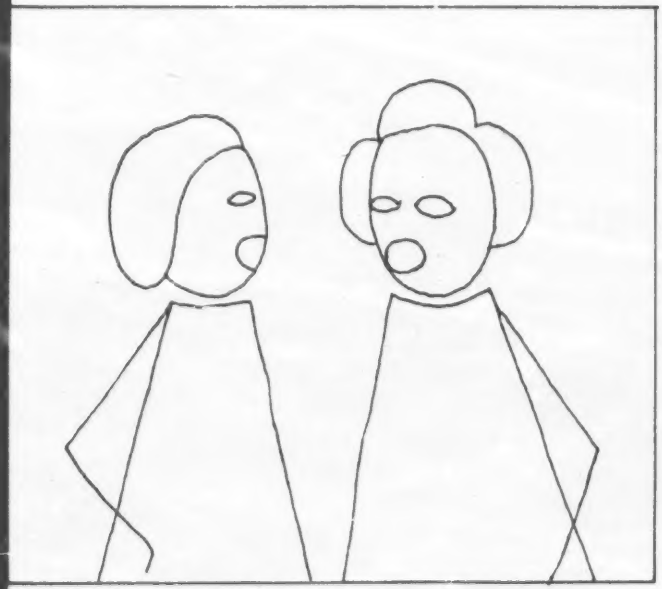
C-40



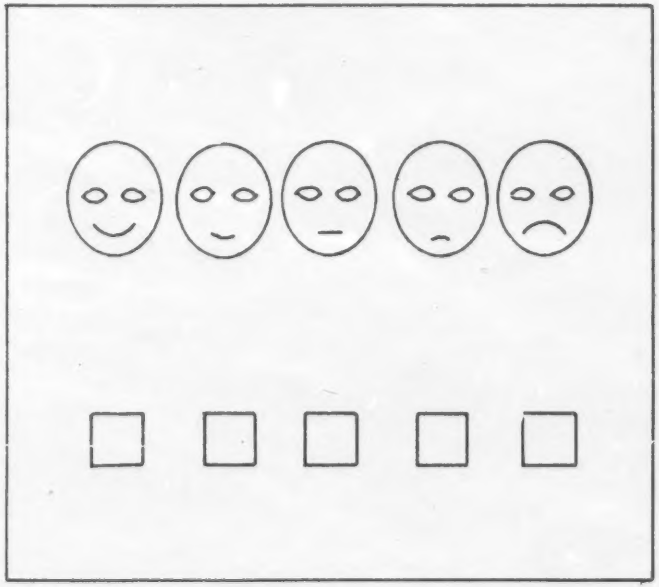
Ken is outside.



He sees some neighbors.



They are talking about kids.



Which one is Ken's face?

SCORING SHEET

Name_____ Grade_____ Age_____ Sex_____

School_____ Teacher_____ Date_____

Peers		School		Home		Community	
1		2		4		3	
6		8		7		5	
9		12		10		11	
15		16		13		14	
18		19		20		17	
22		21		24		23	
27		25		26		28	
30		31		29		32	
33		34		36		35	
39		37		38		40	
Total							